

OCT 19 1920
THE

MEDICAL JOURNAL OF AUSTRALIA

(With which "The Australasian Medical Gazette," and "The Australian Medical Journal" are incorporated.)

The Journal of the Australian Branches of the British Medical Association.

VOL. II.—7TH YEAR—No. 10. SYDNEY: SATURDAY, SEPTEMBER 4, 1920.

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SYDNEY: SATURDAY, SEPTEMBER 4, 1920.

No. 10.

Australasian Medical Congress, Brisbane, 1920.

ADDRESS.¹

Delivered by

The Honourable W. F. Taylor, M.L.C., M.D., D.P.H., etc.,
President of the Eleventh Session, Australasian Medical Congress, 1920.

Ladies and Gentlemen:

I wish to express my sincere gratitude for the great honour conferred upon me in being elected to the Presidency of the Australasian Medical Congress for this, its eleventh session. I fully recognize that my elevation to this distinguished position is more the result of fortuitous circumstances than any special qualification on my part for the office. However, finding myself in the position of President of this Congress, I have endeavoured hitherto to perform the duties appertaining thereto to the best of my ability and I hope to continue the performance of those duties to the end of my term of office in such a manner as will lead to the conclusion on the part of you, the members of Congress, that your confidence in me has not been entirely misplaced.

Before proceeding to the task of reading the address which I have prepared, I wish to offer a very hearty welcome to you all, as members of Congress, more especially to those of you who have come from the other States of the Commonwealth and New Zealand to take an active part in the proceedings of the session which has just been opened in such felicitous terms by His Excellency the Governor-General, whom we are gratified and honoured in having with us this evening, taking such a prominent part in our ceremony, and I am sure that I utter the feeling of everyone here present in saying that we regret exceedingly that he is about to leave us. During his extended term of office, he has succeeded in endearing himself to everyone with whom he has been brought in contact by his affability and to the people of the Commonwealth at large he has proved himself a sincere friend and an earnest and capable adviser. During the at all times anxious and many times dark periods of the five years of war which our British nation went through, he always inspired confidence in the ultimate result by his cheerful and resolute demeanour and the unstinted aid given to every movement which had for its object the promotion of such measures as would conduce to Australia's playing her proper part in the great drama, which at times verged on tragedy for our Empire; and that his efforts in this direction were successful is fully proved by the position which the sailors and soldiers of the Australian Commonwealth won in the great war, happily terminated. Through all these trying times of war and through much political turmoil His Excellency never swerved from the path of duty and rectitude as the constitutional head of the Commonwealth and by his wisdom, tact and impartial bear-

ing has won the respect and esteem of every resident of Australia. His Excellency has at all times shown a keen personal interest in our affairs and in the development of the resources of this great country and, although he is leaving us for other spheres of activity, I am confident that he will ever retain for Australia a warm place in his heart and that his interest in its welfare will never diminish. His Excellency has been fortunate in having for his helpmate such a highly gifted and estimable personality as Lady Helen Munro-Ferguson. To her we owe a deep debt of gratitude for the strenuous work she performed as head of the Red Cross Society and as the prime mover in other matters having for their object the welfare and comfort of our soldiers in the field. That the Red Cross Society did such good work was in a great measure due to the interest she took in it and the unfaltering aid she gave it. As the Australian head of the Voluntary Aid Division she showed great business tact and was in a marked degree successful in stimulating that important organization in its efforts. The good work she did during the war will ever be remembered by us with feelings of gratitude and high appreciation.

I would like to take this opportunity of thanking His Excellency the Lieutenant-Governor for being present here this evening and taking an active part in the proceedings. I would also thank the Honourable the Acting Premier and the Right Worshipful the Mayor of Brisbane for their presence with us and for the words of welcome to our visiting members to which they have given utterance. I wish also to thank Lieutenant-General Sir Harry Chauvel for the interest he has shown in the Congress and all who are non-members of the Congress for their kindness in coming here this evening and the interest that they show in its proceedings. I am sorry that this hall, the only suitable one in the city for a large audience to gather in, is situated so far from the centre of Brisbane, but now that the foundation stone of a new Town Hall has been laid for the second or third time, I think that I am safe in saying that at the next meeting of the Congress in Brisbane, which in the ordinary course of events should be in twenty years from now, those of you who attend its opening ceremony will not have so far to travel as you have done to-night.

And now to my theme:—

The tenth session of the Australasian Medical Congress was held in Auckland, New Zealand, in February, 1914, so that in the ordinary course of a triennial congress the eleventh session should have been held towards the end of 1917. With that object in view steps were taken to provide the necessary machinery and at a meeting of the members of the medical profession in Queensland in June, 1914, a Treasurer, General Secretary and an Executive Council were appointed to make the necessary arrangements for holding the session of Congress in Brisbane in 1917 at a date to be fixed. However, war breaking out, it was decided to postpone the holding of the session

¹ We regret that it has been impossible to reproduce the Presidential Address unabridged, owing to its considerable length. The full text will be published in the Transactions of Congress.

until peace was proclaimed, owing to such a large number of the members of the profession volunteering for active service with the Australian Imperial Force. It was thought at the time that the postponement would only be a comparatively short one, as the war could not last many months, owing to its magnitude and the enormous cost of prosecuting it, but as time went on our fondest hopes in this respect were shattered; the fact was borne upon us that we were in for a prolonged and desperate struggle, which was fully verified. Instead of the war lasting only six months, as most people expected at the first, it continued with increasing magnitude and ferocity until November, 1918, when the armistice was declared at the request of the beaten enemy of the allies and humanity; justice and right eventually triumphed over inhumanity, barbarity and gross wrong of every description. During these four years of anxiety, trial and woe an ever increasing number of our brightest and best of manhood volunteered for active service at the front in the Australian Imperial Force and among these all of the members of our profession who could possibly get away, were included. The glorious work which they did in the great war, will never be forgotten, but will appear brighter and more meritorious as it is handed down to posterity by future historians. Forced to be a spectator of and not a participator in these great and noble achievements of our Australian Army Medical Corps, I am unable to speak from practical experience respecting their work, but from all sides and sources reports constantly came of their courage and devotion to duty in the trenches of Gallipoli, in the battle fields of France, Flanders and Palestine and everywhere on sea and on land. To their untiring efforts to relieve suffering and mitigate the effects of injuries at the front, in the hospitals and on shipboard many thousands of human lives have been saved and numerous individuals restored to the active pursuits of life who were apparently condemned to remain cripples and dependants for the remainder of their existence on earth. But the efforts of the medical members of the Australian Imperial Force would not have been attended with such satisfactory results had they not been so ably seconded by the unselfish devotion to duty and the skill and untiring energy of the nursing sisters. Those who have been hospital patients, speak in the highest terms of the kindness and care their nurses bestowed upon them and many a desperate case owes its recovery in great measure to the cheerfulness and unwearied attention of the sister who had charge of it.

This dreadful war, with all its horrors and suffering, has had its redeeming features, for it has stimulated and unfolded much of the good in humanity; the world is all the better for the ordeal which it has gone and is still going through. The old order has changed and the new order, we confidently believe, better order, is being established; and, although we are still passing through a period of much unrest throughout the world, there are not lacking signs of the commencement of an era of peace and goodwill among mankind and a fuller realization of that brotherhood of humanity which is not only a natural fact in this physical plane, but a reality on the higher, spiritual side of man's being.

Suggestion in the Treatment of Neuroses.

Many and varied have been the lessons taught by the great war in preventive and curative medicine and surgery. Thanks to bacteriology and the advanced hygienic methods carefully carried out, diseases of the armies in the field of former wars, such as typhoid or enteric fever, septicæmia, cholera, dysentery, etc., which were said to have killed more men than the bullet and sword, etc., during a campaign, were rendered in a great measure non-existent. But if the old time diseases incidental to armies in the field were to a great extent done away with, they were replaced by the hellish devices of gas and flame throwing, which, coupled with the use of shells and high explosives, renders it difficult to conceive how anything living escaped destruction, for the surface of the earth was riddled with enormous craters, the result of shell explosion, and trees and everything standing levelled to the ground. Exposed to this inferno, in addition to the misery of the trenches, with the nervous system worked up to the highest pitch of tension, is it to be wondered at that a large number of the soldiers should suffer from neuroses of different kinds to a greater or less extent purely functional in many cases and in others superadded to the effects of injury? A wide field has been opened up to neurologists and psychologists and the fact that the human being is something more than a physical body has been recognized and the mental element in the production and continuance of diseased conditions of the organism more fully realized. Hypnotism, persuasion, suggestion and psycho-analysis, etc., are the different forms of treatment which have been found useful. One reads or is told of recoveries bordering on the miraculous. The blind, deaf and dumb have been restored to sight, hearing and speech by one or another of these methods, or by combinations of them and cases of paralysis of many months' standing have been reported to be cured in almost as many minutes.

Dr. Taylor proceeded to discuss the history of the development of psycho-therapy from the time when Charcot founded his famous school of hypnotic treatment at *La Salpêtrière* in Paris to the institution of Freud's theory and practice of psycho-analysis.

Preventive Medicine.

There is a general feeling throughout the world that pre-war conditions of human existence should be changed, that the social order which condemned the great majority of mankind to privation and suffering, while the few lived lives of luxury and care, was an unfair state of things and the facts disclosed that a very large proportion of the adult male population—one-fourth, if not more—were by reason of physical infirmity partly congenital and partly the result of having been born and reared in unwholesome environments or both, were unfit for military service, has aroused attention to the necessity of measures being adopted in every country to do away with this old social condition if the result which so many have fought, suffered and died for, is to be achieved. That is the emancipation of the toiling masses from the thralldom which kept them poor and always more or less on the verge of starvation. That the state of existence of the worker should be changed to one of

health and happiness and his children's children should enjoy equally with the well-to-do the blessings of health, fresh air, beautiful surroundings, good music and all that will tend to raise man from squalor, misery and discontent to health, happiness and contentment. In bringing about this latter state of affairs the medical profession have a great task before them and one which will tax their skill and energies to the utmost, for on that profession rests the duty of conserving the health of the community by preventing disease. Curative medicine has done much to alleviate human suffering and prolong life, but to preventive medicine the people look to save them from disease and render them healthy and strong, to prevent that infantile mortality which is so rampant, to protect them from overcrowding and thereby lessen the incidence of tuberculosis, typhoid fever, diphtheria and other diseases which mainly owe their existence to unhygienic conditions.

I am well aware that each medical practitioner acting singly is powerless to do much in altering the existing insanitary conditions under which so many of his fellow creatures live, that the most he can do, as a rule, is to try to instruct his patients in matters of cleanliness of home and person and the avoidance of immoral actions and the abuse of alcohol, etc., and that he is powerless to alter the environment under which the individual and his family exist. But if his power is limited and, if "his voice is like the voice of one crying in the wilderness" when acting singly, when united with others in sufficient numbers it will become as the voice of thunder and shake the supineness of the governments and the carelessness of people into a full recognition of the Latin motto "*Salus populi suprema lex.*" Then we shall have slums a thing of the past and cottages in well-drained suburbs, standing in neat trim gardens within easy access of the centre of the city by reason of the efficient and cheap means of transit, although miles away from it. One great obstacle to the medical practitioner not being able to accomplish as much in this direction as he should do or would like to do, is that, as a rule, he is so busily employed, night and day, in attending to the sick. He has not the time to take on any public action to prevent sickness and further that he appears to have a holy horror of appearing in public and doing anything which may be construed into a political action. Judging from the few who seek parliamentary positions, the profession as a whole appears to shun politics as his satanic majesty is reputed to shun holy water. Well, there may be and I believe there are some good reasons for his preferring to work silently and unobtrusively in these matters and not to enter the political world, where a man, as a rule, puts himself up as a sort of "Aunt Sally," to be shied at by every lamp post political orator and to be castigated by a section of the press for everything he did or did not do. Australia is suffering from a plethora of politics and a superabundance of politicians and a man who can keep clear of both, must be somewhat above the common. So I do not advise my professional brethren to become active politicians, but what I strongly advise them to do is to make concerted action in the direction indicated and this they can do with com-

parative ease and with great effect on the body politic through medical societies, notably, by means of the British Medical Association, which is world wide and has its branches wherever a British community exists. This Association has done much good work to the profession and the public in the past and it is capable of doing a still greater work in preventing disease by the influence which it may exert on governments and local authorities, who with the best intentions are proverbially slow to act unless some dire epidemic threatens. There is always a disinclination to spend money upon what may be termed unproductive work unless absolutely obliged to do so, as they do not fully realize the fact that prevention is not only better than cure, but is much cheaper in the long run. It might not be out of place for me to suggest that each Branch of the British Medical Association in Australia should appoint committees to deal with the hygienic aspect of preventive medicine. Prophylaxis is well looked after not only by practitioners of medicine, but by the manufacturers of vaccines and serums and in this respect the Commonwealth Government have done well in establishing the Commonwealth Serum Laboratories. I would venture to suggest that a town planning committee should be appointed by the Branch in each State, whose function it would be to keep a continued watch on the cutting up of blocks of land by speculators and others and to see that the land advertised for sale is well drained and the allotments have a sufficient area to prevent overcrowding, say, a minimum of 32 perches; that the streets be a chain and a half wide and that in the case of comparatively large portions of land recreation areas be provided for. That pools of stagnant water on the block of land or in the neighbourhood of it be drained or filled in, so as to avoid as much as possible the mosquito pest and, further, that the land be fairly accessible and the road leading to it in good condition. The houses should be built after an approved plan and due regard had to the disposal of excreta and house refuse, especially kitchen slops. I do not think that committees of this sort would interfere at all with the town planning societies which exist in every State, but would rather be an assistance by strengthening the hands of the societies in their efforts to remedy existing defects of cities and towns, as well as having new towns built on approved principles of town planning. At present the general public are not quite prepared to put to practical use the teachings of town planners, for so far as I am aware no move has been taken to plan prospective towns and villages on town planning principles, but it is only a matter of educating people to these principles; a good deal could be done in that direction by committees of British Medical Association Branches.

Nationalization of the Profession.

In connexion with preventive medicine the relation of the medical profession to the public will require some modification of its present condition and in the opinion of many, the time is not far distant when the question of nationalizing the profession will become an acute one in Australasia, as well as in other British communities. It is necessary, therefore, for every member of the profession to give this ques-

tion serious consideration and to determine in his or her own mind to what extent nationalization, if at all, would benefit the general public. Further, from that point of view the question should be principally considered. The matter will be considered by the public and action taken by their parliaments. The question then we have to decide is: Would the public as a whole benefit by the change? Would they be better served medically from both the curative and preventive standpoint than they are now, or would they, by a modification of the present system, whereby they would be induced to apply earlier for assistance when unwell than they do now on account of the cost of medical advice? I believe that this is at the bottom of the present idea of nationalization. It is thought that if the individual of moderate means, depending on a salary none too large for his requirements and those of his family, could obtain medical assistance for a comparatively small sum, including medicine, it would be a great relief to him, both mentally and financially. He does not care to go to a public hospital or to send his wife or child there and would much prefer treatment in his own home, were the cost not prohibitive. So he is forced to take a step which is repugnant to his feelings and take advantage of a public charity. The poor are well provided for by public hospitals and the artisan and worker generally meet the difficulty to a great extent by their friendly societies. The well-to-do can afford the advantages of a private hospital and their own medical attendant. It appears to me that if the medical needs of the so-called middle class, i.e., those on comparatively small salaries, could be met, the idea of nationalizing the medical profession would not be so much thought of.

Dr. Taylor spoke at some length on the details of a scheme of nationalization of the medical profession, devised on the basis of the organization of the Royal Army Medical Corps and modified to the requirements of the civil community.

Concluding this chapter he said:—

But in the event of the nationalization of the medical profession becoming a matter of practical politics, it is highly desirable that the question should be viewed from all standpoints by every member of it, so that when the time comes for action the profession as a whole will know what it requires and will be prepared to take the necessary steps to gain its end, while fully conserving the interests of the community.

Medical Education.

There is a pretty general feeling throughout the profession that the time has come for some radical changes in the education of the medical student. The number of subjects that he is required to have a fair knowledge of is ever on the increase and the question that presents itself is: Should the time of the curriculum be extended to six years, or should the present system of teaching be so modified as to give better instruction in the existing term of five years of study?

It has always appeared to me that the great defect in most British schools of medicine was the absence of effective clinical instruction. I am speaking of my experience in my younger days. I cannot speak from practical knowledge of the present-day method in this respect, but I judge from coming into contact with

those who have recently qualified, that only the students who have been fortunate enough to obtain clinical clerkships or dresserships, have much opportunity of becoming practically acquainted with diseased conditions of the human being. Under the existing system I can conceive it to be very difficult to afford opportunities to everyone of five or six hundred students to gain a practical knowledge of the profession that they are aspiring to become members of and for this reason small medical schools turn out a greater number of men equipped to practise their profession than the larger and more popular schools, in proportion to the number of students attending each.

The President then gave an account of the methods adopted in England and in Paris fifty or sixty years ago, particularly in regard to the teaching of clinical medicine and surgery.

What I wish to emphasize in the course of medical training of students is the necessity of their being familiarized with sickness at as early a stage in their career as possible and I am glad to note that in the "Report of the Edinburgh Pathological Club on the Training of the Student of Medicine" this course is recommended. The fourth proposal is entitled "Facilities for Evening Students in Hospital":—

The Club desires to impress upon the authorities concerned the importance of providing facilities for students attending at the infirmary wards and out-patient departments in the evening for the purposes of clinical work and study, subject always to the interests and comfort of the patients being safeguarded.

And proposal 12 is headed "Attendance at Hospital Recommended During the Whole Curriculum":—

Still further to insure that the students shall acquire and maintain a scientific attitude of mind towards the purely professional aspect of his studies, the Club is of opinion that he should be brought into direct contact with the work of the hospitals throughout the whole of his curriculum. It is felt that an early introduction to the clinical features of elementary surgery and medicine would add interest and give point to his studies of the biological and physical sciences and still more to such subjects as anatomy and physiology. It would also be an advantage if anatomical and physiological demonstrations were illustrated as far as possible from living subjects.

The other proposals contained in this report appear to me to be worthy of serious consideration by the authorities of our schools of medicine.

Tropical Australia.

Among the subjects that will prominently engage the attention of the Congress will be the suitability of tropical Australia for the settlement of a white race. It is a well-known fact that the healthy, robust white races can adapt themselves to any climate, but whether their descendants will thrive under similar conditions of climate is a question which it is difficult to determine without the experience of two or three generations. But it may be pointed out that if the white man will endeavour to live under conditions suitable to the climate and not try to make the climate agree with the habit he has been accustomed to in the temperate zones, he will find life much more agreeable and his health probably unimpaired. Of course, before a tropical country can be made habitable with any prospect of success by a white race, certain diseases, such as malaria, yellow fever, hookworm, plague and other insect-borne diseases must be elim-

inated and the task of doing so, although a heavy one, is not insuperable. When we consider the condition which pertained in Panama before Surgeon-General Sir Wm. Gorgas took the matter in hand and how he was able to render a country as fatal to the white man as that was a healthy country for him to live in, we need not despair of being able to effect similar results if we only take the trouble and pay the cost of doing so. The world at large and the tropical part of it in particular has sustained a loss in the death of that truly great man, the gravity of which it is impossible to overestimate. At one time the Executive Committee hoped that Surgeon-General Sir William Gorgas might be induced to attend this Congress and applied to the Prime Minister of the Commonwealth to invite him as its guest. Mr. Hughes, recognizing the great result that might follow from the presence at the Congress of such a distinguished man in tropical preventive medicine, promptly acceded to the request and cabled the authorities at Washington accordingly. The answer was that Surgeon-General Gorgas had proceeded to Europe and from thence he would go to Chili for two years. But it was quite within the bounds of possibility that had he lived he might have visited Australia in the near future. However, fate has ordained otherwise and we can only try to imitate his example as closely as possible and wage incessant war on the mosquito, the fertile source of malaria, yellow fever, filariasis, etc., and a constant annoyance in most localities during the summer. Efforts have been made to cope with the matter from time to time and about six years ago a determined attempt was made by the Department of Public Health to deal with the subject, but for some unknown reason, probably on the score of expense, the Department handed over the work to the local authorities, with the result that practically nothing is being done to mitigate this nuisance and formidable danger to the public health. In addition to the malaria-bearing mosquito, the anopheles, we have the *Stegomyia fasciata*, the carrier of yellow fever, fairly prevalent in many localities of the tropical coast line and it only needs the importation from America of a few infected mosquitoes to set up an epidemic of yellow fever in our midst. Plague, of which we had some harsh experience a few years ago, may break out at any time, for rats swarm everywhere and no systematic attempts are being made to exterminate them. The reason that these matters are not attended to as they should be, is that the onus of dealing with them rests on the local authorities. Now, this city is surrounded by such a number of local authorities that it is impossible to get concerted action in such matters for any length of time. Each local authority is more or less faced with a shortage of funds and the most popular alderman or shire councillor with the rate-payers is the one who will try and save expenditure of money, so that the rates may be kept down. It is difficult to persuade the people that the best asset any country can have is a healthy population and until that is realized, the Health Department will be the subject of economical fits on the part of the Government and work that can be more satisfactorily and more cheaply done by the central authority, will be relegated to the local authorities, who cannot be successful from

want of unity of action on their part; and so when an epidemic breaks out, the community is found to be in a more or less defenceless position. By being ready at all times to cope with an outbreak of disease, it is rendered less likely to occur and should it do so, can be combated more readily and with every prospect of speedy success. If the health of the people is to be properly safeguarded it is evident that a central authority, with full power to act, should be charged with making the necessary preparations to prevent an outbreak of disease by enforcing, either directly or through the local authority, the necessary sanitary measures.

Alcohol.

The question of prohibiting the manufacture and use of alcoholic beverages is much in evidence in many parts of the world at present and the people of Queensland will be called upon in October next to decide whether they will have a continuance of the present system of free sale of intoxicants from 6 a.m. until 11 p.m. every day excepting Sundays, or State manufacture and control, or prohibition. The advocates of total prohibition maintain that the use of alcohol in any form, habitually or intermittently, is injurious to the human organism and call upon the medical profession to endorse this on physiological grounds. They regard alcohol as a poison and that its use should be restricted to cases of illness and then only when prescribed by the medical attendant, as in the case of opium and other narcotics and poisons.

There is no doubt but that alcohol taken habitually in considerable quantities may, without producing intoxication or even the semblance of it, give rise to injurious and more or less permanent effects on many people, but an immunity seems to be established in others which enables them to live to an advanced age and then die from some disease, such as pneumonia, etc., or old age. As in the case of tobacco, the system gets accustomed to nicotine and smokers enjoy their pipe or cigarette without any apparent ill effects from youth to extreme old age, whereas others can never take to smoking kindly no matter how much they try; so with alcohol drinkers, the effects of it are very pronounced on some and others may drink freely without manifesting or feeling any injurious effects. I think, judging from the absence of drunkenness in wine-producing countries and the fact that few, if any, departures from the normal condition of health take place in persons accustomed to drink light wines or mild ales, that the alcohol taken in these ways may not only be free from injurious effects, but may act as an agreeable tonic by promoting the digestion and assimilation of food and preventing putrefactive changes in the intestinal contents. We all deplore the evils which habits of drunkenness engender in the individual and the misery and destitution caused to his dependants and are prepared to go a long way and practise total abstinence on ourselves in order to prevent drunkards being made, but at the same time we are forced to admit that the moderate use of mild wines and ales is in many cases beneficial to the individual's physical well-being and mental activity. I do not hold this opinion from the point of view of the moderate drinker, for I have been a total abstainer for many

years, but from a long period of observation, both of sick and healthy persons and persons who are neither one nor the other, but ailing and in need of something in the shape of a mild stimulant, I maintain that alcohol taken as wine or ale has its use. Therefore, while stopping the sale of whisky, brandy, gin and rum except as a drug, I would permit the sale of light wine containing not more than 7% alcohol and beer or ale of 5% alcoholic strength.

The Congress.

In conclusion I wish to point out that the meetings of the Australasian Medical Congress, first called the Inter-Colonial Medical Congress, of which the present is the eleventh session, are held for the purpose of endeavouring by the interchange of the knowledge and personal experience of its members to fit them to cope more successfully with disease and accident and, therefore, to mitigate the sufferings of the people among whom they reside. The amount of good done in this way cannot be estimated from a financial point of view and, therefore, may appear to be somewhat problematical in the eyes of the ordinary business man, or politician, but if by meetings such as these the sum of human suffering can be lessened by any appreciable degree, then, I contend, that they are fully justifiable.

To the medical practitioner, perhaps more than to the priest or minister, is given to see the sad side of man's existence and to him, more than to anyone else, is manifest the real good that is in humanity, for it is by pain and suffering that nobility of character becomes manifest, irrespective of race and colour, sex or creed, poverty or riches. Fundamentally man is the same, made after the image and in the likeness of God. "Know ye not that ye are the temple of God and that the Spirit of God dwelleth in you? If any man defile his body, him will God destroy, for the temple of God is holy, which temple ye are," says Paul, the occultist, in *I. Corinthians* 3, 15 and 16. To the medical practitioners is given the care of this human body, this temple of God and blessed will he be who strives with singleness of purpose to fulfil his mission uninfluenced by thought of gain or wordly position. Let, then, your one aim be, my professional brethren, to fit yourselves to perform to the fullest and in the highest degree your noble task of relieving pain and suffering in whomsoever found.

SECTION OF NAVAL AND MILITARY MEDICINE AND SURGERY.

PRESIDENTIAL ADDRESS.

By R. J. Millard, C.M.G., C.B.E., M.B., Ch.M. (Syd.),
D.P.H. (Camb.),

Colonel, Australian Army Medical Corps.

It is for me a great honour and privilege to preside over the Naval and Military Section of this Congress, which meets under such extremely interesting conditions. Since the last meeting of the Section, what great things have happened and what a change has taken place in our outlook on the medical aspects of matters naval and military! Then we had an Army Medical Service, it is true, but only a few of

us had had any experience of active service conditions and our interest in military matters was largely academical.

In 1914 we were suddenly called upon to take part in the great world war which for four years absorbed all our attention and energy. Now that the struggle is over, it is surely of the utmost importance and interest to take stock of what we have done, to consider in what respects we might have done it better and to endeavour to draw from our war experiences some conclusions which may be of service in civilian life, as well as in any future war.

For these reasons the present meeting of this Section is by far the most important that has ever been held at any meeting of the Australasian Congress and I trust that the proceedings will be proportionately interesting and profitable.

It must be admitted that Australia's participation in the great war was greatly embarrassed by her geographical position in relation to the several fronts and this was felt perhaps more in the medical than in any other department. Our homeland in Australia had to raise and organize units to work under conditions which could not well be appreciated at a distance of many thousands of miles. These units had to be maintained and reinforced in such widely different regions as Gallipoli, Egypt, Palestine, Salonica, Mesopotamia, India and Europe. Arrangements had to be made, not only for dealing with the sick and wounded in what might be termed our advanced bases in Egypt and England, but also for their evacuation by hospital ship and ambulance transport over the many miles of submarine-infested ocean that lay between these advanced bases and our real base, Australia, and for their treatment and disposal in Australia. The task was great, but I think it may be said that the Australian Medical and Nursing Services rose to the occasion and displayed wonderful energy and adaptability in meeting all calls made on them.

But while it is pleasing to congratulate ourselves on having accomplished a great deal, it will be much more useful to hear criticisms of things that might have been done better and suggestions of how they should be done in the future. This meeting of so many keen medical officers with such extensive and varied military experience affords a unique opportunity for such criticism. Attention might usefully be directed to many matters.

Recruiting.

Probably only those who had to select the recruits in Australia, can fully appreciate the difficulty of insuring that only fit men embarked for service overseas, but it is a lamentable fact that a very large number of men useless for active service were sent and had to be returned without having rendered any military service at all. This entailed waste of transport space, of camp and hospital accommodation on the other side, of medical and other administrative services which could ill be spared and involved Australia in enormous expense for transport, accommodation, pay and pension without any *quid pro quo*. One heard tales of personation in which a fit man underwent medical examination in the name of the unfit man, who subsequently embarked. For such cases the medical service could not be held responsible.

But the majority of unfits were probably passed as medically fit through a lack of appreciation by the examining medical officer of the standard that was essential and of the serious disservice that he was doing to his country by helping the unfit man to embark.

The controlling authorities also perhaps failed to lay down in sufficiently explicit detail the necessary qualifications for active service. For example, there seemed to be an impression that physique was not of such importance in an Australian Army Medical Corps man as in others, a mistake that was badly felt when it became necessary to carry wounded over long distances on heavy ground.

This is one of the matters that will probably be better done next time, because we have now a large body of medical men who know by personal experience what active service is and what demands it makes on the soldier and who know also how much worse than useless in the field is the unfit man.

Field Medical Units.

There are many important details relating to these which call for discussion in the light of the vast experience gained in the recent war. The best establishment and equipment for a field ambulance and the best organization and use of the ambulances of a division, *e.g.*, how far the present arrangement should be maintained of tent and bearer subdivisions, the best arrangement of regimental aid post, advanced dressing station and main dressing station in relation to division and corps organization are matters which have been eagerly discussed during all these years of active service. Now is a unique opportunity to put on record the conclusions formed, which cannot fail to be of great service to the authorities responsible for future organization and administration. So also regarding the sanitary section, which did so much for the preservation of the health of the troops and which was variously used as part of the division and moving with it, or as stationary in charge of a particular area, a variation which did not always meet with the approval of the section concerned.

Then there is the fascinating subject of the resuscitation team, which, if it did not originate with the Australian Imperial Force, was at any rate taken up with such enthusiasm by the Deputy Director Medical Service Corps (Colonel Barber) that, by the end of hostilities, the Australian Imperial Force was probably better equipped with these teams than was any other force. The valuable work done by these teams in the forward areas in saving lives that would have been lost through hemorrhage or shock, should certainly lead to their perpetuation in any scheme of organization of field medical units in the future.

Lines of Communication Units.

After the field units proper one naturally comes to the lines of communication and first to the casualty clearing station. Ideas regarding this unit changed greatly during the war. Beginning with accommodation for 200 patients on stretchers and seven medical officers who carried out very little more surgery than at a field ambulance, it developed progressively in France until, at the end of the war, it accommo-

dated 200 patients on beds and 800 on stretchers, was equipped with one or two operating theatres, containing as many as twelve tables, with electric light and X-ray apparatus and included in its personnel not only a number of surgical teams, but also a number of nursing sisters. A very large amount of first-rate surgery was done in these casualty clearing stations.

It would be very interesting and useful to hear the opinions of members with field service experience as to what should be the future establishment and rôle of a casualty clearing station. General Sir Cuthbert Wallace, in his lecture before the Clinical Meeting of the British Medical Association last year, showed that the motor ambulance has greatly changed the relation of the casualty clearing station to the firing-line and to the field ambulance. He also emphasized the necessity for providing the casualty clearing station with its own transport, so that it may be able to move at short notice with the troops.

The Base.

The medical organization of the base is a much more complex problem. The casualty, sick or wounded, is received into a general hospital from the lines of communication and the general hospital must be prepared to take everything sent to it, if necessary expanding at short notice to double or treble its original size, if there has been heavy fighting. This must be provided for in its establishment and equipment. Ancillary to the general hospital there must be auxiliary and convalescent hospitals, to take the overflow and convalescent patients. Here is the parting of the ways for the patient. Either he is permanently unfit or he is temporarily unfit, but capable of being made fit within a reasonable time. The decision on this point is made by a medical board, but obviously many cases are extremely difficult and even with the utmost care and the highest professional knowledge mistakes will occur. The best medical board is that which combines with its professional knowledge a good share of common-sense appreciation of the psychology of the Australian soldier and his tricks and his manners and, what is just as important, a knowledge from personal experience of what field service really means and involves. A would-be Spartan medical board, indiscriminately passing unfit men as fit and sending them back to the field improperly or prematurely will do as much harm to the service as a board which is too ready to take the opposite view. In England we adopted the rule that a man not likely to be fit within six months was to be returned to Australia, unless he was fit for home service in England and was required for this. Under this system the unfits were eliminated in a continuous stream to Australia, but yet camps and hospitals were always clogged with numbers of men kept hanging on long after they ought to have been home in Australia and out of the Australian Imperial Force, because over-sanguine boards continued to classify them as temporarily unfit and likely to be fit within three or six months.

The convalescent dépôt and command dépôt in which the temporarily unfit man is gradually worked up again into a first-class fighting man are very largely medical. They depend for their success on wise medical administration. In a prolonged war

they are a very important part of the army organization, as the trained fighting man is much too valuable to be let go as long as he can be made fit to fight. Properly used, they are of immense use to the individual soldier, by de-hospitalizing him and making him once more a man instead of a hospital patient. The man who is kept for weeks or months in hospital after he has ceased to need active treatment, runs a very great risk of being thereby demoralized and converted into an aimless loafer. It does him a world of good to get into a depôt where he comes under such military discipline that he has to take graduated exercise, play suitable games and generally "sit up and take notice." The gain in mental alertness, as well as in physical vigour, is remarkable.

For the permanently unfit man other provision must be made, according to his disability, whether mental or bodily, medical or surgical. This includes asylums and homes for insanity and war neuroses, sanatoria for tuberculosis, hospitals for chronic medical and surgical diseases, orthopædic hospitals and limb factories, training for the blind. These are needs which we can appreciate here, because we have unfortunately permanently unfit men of all these classes.

But the medical service at the base has other grave responsibilities besides that of dealing with war casualties, surgical and medical. It has to select the recruit, keep him in health during his training and send him to the front in the best possible condition and free of all infectious or contagious disease which might create disability in the fighting force. The difficulty of keeping the healthy man healthy arises from the congregation of large numbers of young adults in camps or transports, perhaps under very unaccustomed conditions of climate and diet and general surroundings and free from all home restraints. These circumstances favour the propagation of infectious diseases, including venereal disease, and call for the utmost devotion to duty of the regimental medical officer in medical charge. Unfortunately, the regimental medical officer of the best type is generally fretting to get away to the front, where he thinks that he could be of more use than in holding sick parades, supervising camp sanitation and keeping the depôt combatant officers up to the proper pitch of respect for medical requirements.

A very important factor in maintaining the soldier's health is, of course, the Dental Service and this was developed immensely during the war. In 1914 there were no dental officers with the Australian Imperial Force; the first were appointed in 1915 and by the end of the war we had a dental officer with each field ambulance, casualty clearing station and hospital and a liberal dental establishment at every command depôt and group of training battalions. The dental officer has "made good" in the Australian Imperial Force and will certainly be included in any future army organization.

Venereal Disease.

Another responsibility of the medical service, at the base especially, is the provision for combating venereal disease. There has been much discussion as to what are the best preventive measures to adopt. In the Australian Imperial Force the medical officers

were required to lecture the men repeatedly on the dangers of venereal diseases, until every man must have been fully apprised of the risk and heartily sick of the subject. In addition, a man going on leave was encouraged to take with him a packet containing a tube of calomel ointment and a tube of "nargol," with directions for use. The result was disappointing. Thousands of these outfits were taken by the men, but yet the incidence of venereal disease remained very high. Against this free issue of protective outfits it has been urged with reason, first, that the issue of the pseudo-protective packet is an incentive to the man to take a risk which he might otherwise have avoided and, secondly, that only a small percentage of the men can be expected to use the applications effectively as directed. Personally, I think these outfits probably did more harm than good and under similar circumstances in the future I would cut them out. No such objections can be made to the next line of defence—the early treatment depôt, of which a man was exhorted to make use if he had been exposed to infection. If this be kept thoroughly efficient, the men will readily use it and it seems well established that gonorrhœa, if treated early enough, can be absolutely aborted. Finally, the venereal diseases hospital must be regarded as a most important part of the medical machinery of the base. It not only has the function of refitting men for active service again, but also of protecting the State from the return to civilian life of a still infected man.

Red Cross Society.

Another matter which demands earnest consideration for the future is the relation which should obtain between the activities of the Red Cross Society and those of the Army Medical Service proper. We all know and fully appreciate the great benefits which we derived from the work of the Australian Branch of the British Red Cross Society. Immense sums of money were enthusiastically subscribed by the Australian public and were spent lavishly for the benefit of the Australian Imperial Force sick and wounded. But there always seemed to be a lack of guiding principles as to what objects were a fair charge on the generosity of the public and what should be provided for out of Government funds. The Red Cross Society played the part of the fairy godmother and was successfully appealed to to provide all sorts of things—hospitals, hostels, motor ambulances, extra equipment and furniture, extra food and boundless stocks of minor articles, such as clothing, chocolate and tobacco. Many of these things were absolute necessities and perhaps it may seem immaterial whether they were paid for out of subscriptions or out of taxes, but one could not help feeling that the Red Cross expenditure was often lavish and ill-judged, leading to abuses which would not have occurred if the demands had been subject to restrictions carefully thought out beforehand. But in this, as in so many other war activities, we were lacking in experience and emergencies had to be met rapidly as they arose. Certain it is that much suffering was alleviated by the work of the Red Cross Society, but in many cases this was because the needs of the situation had not been officially appreciated and provided for beforehand. With the experience now available

we should be in a better position to forecast our requirements and provide for them officially, so that our men in future should not be so dependent on public charity for necessities and comforts.

When we turn from self-congratulation on what we have done and consideration of how much better we might have done it and attempt a survey of what medicine and surgery has learned from the great war, we have indeed an extensive theme. On an occasion like the present I can touch on only a few of the many points that suggest themselves.

Surgery.

Under this heading one naturally thinks of the work that has been done in connexion with compound fractures and bone injuries generally. These injuries have unfortunately left us an immense legacy of patients with septic foci in their bones, which will need judicious operative treatment for many a long year to come. In this connexion mention should be made of the great benefit obtained by use of the Thomas splint and its many modifications and the experience gained in war will certainly be of service in civil practice. Artificial limbs have been studied as they never were before. Reconstructive or orthopedic surgery has had its field of application immensely widened and wonderful things have been done in the restoration of function and in plastic surgery. The surgery of chest and abdominal injuries was greatly advanced as the war went on and many a case which would have been desperately hopeless in 1914 was successfully dealt with in 1918.

The almost universally septic character of war injuries necessitated an immense revival of interest in antiseptic and aseptic treatment. While we cannot claim that the problems were all solved, yet there is no doubt that the contributions of Carrel, Dakin and others did add much to our knowledge in these matters.

Medicine.

Under this heading one must first pay tribute to the success achieved by British preventive medicine. The world-wide demonstration of the value of protective inoculation against the enteric group of diseases should have far-reaching beneficial results in civilian life in a country like Australia, where in the past typhoid fever has been a serious danger to the public health, especially of our unsewered country towns. In the whole of the British Armies in France, which were systematically inoculated and re-inoculated with "T.A.B." vaccine, from August, 1914, to December, 1918, there were only 266 deaths from typhoid and paratyphoid fevers, as compared with over 10,000 deaths from these diseases among British troops in the South African War. These figures are surely sufficient to make us preach antityphoid inoculation for the civilian population and to educate all classes to recognize its value. And the results obtained in typhoid should stimulate us to seek similar preventives in other infectious diseases, many of which have indeed been used during the present war with encouraging results.

In the realms of sanitation also we have learned most valuable lessons as to what may be accomplished by organized, well-directed effort to control the "dirt diseases" which formerly were associated with ty-

phoid fever in every campaign. Fly prevention, destruction of refuse, safe disposal of faeces and urine, delousing and disinfection—all these were worked out in practical detail as never before and the application to urban and rural conditions of the knowledge so gained cannot fail to be productive of much benefit to the public health.

In its more clinical aspects, medicine has benefited greatly by the attention necessarily directed to such matters as war neuroses, cardio-vascular affections, trench fever, infective jaundice, nephritis, gas poisoning. Never before has such a mass of clinical material been so intensively studied. It is not too much to hope that, for example, psychological medicine may be considerably advanced by the results obtained by the several methods of treatment applied to shell shock and allied conditions.

Venereal disease has, as indicated already, unfortunately been one of the urgent medical problems of the war and while therapeutic methods have undoubtedly been greatly developed, yet one must realize that there remain a very large number of incompletely cured cases which necessarily are a serious menace to the health of the civilian population.

As a partial set-off, however, there are now throughout Australia a large number of returned medical officers who have had wide experience of the latest and most efficient methods of treatment and it is to be expected that their services will be widely made use of.

In the realm of administration civilian medicine may profit by the lessons of the war. The vast huddled hospitals of France and England have shown us that even in that climate medical and surgical cases do not require expensive architectural palaces—much more in the climate of Australia should we be able to simplify and cheapen hospital construction. The principle of the casualty clearing station could be usefully applied to our crowded city hospitals, which should deal only with casualties and emergencies, evacuating by a well organized motor ambulance service to larger hospitals situated on the outskirts of the town, where the patients would be in a more wholesome environment.

What are we going to do in the next war? I have dwelt in some detail on the several functions which an army medical service must fulfil and which must be borne in mind in any preparatory organization. But I admit the difficulty of formulating any scheme of training which would include them all. The training difficulty is greatest in regard to the lines of communication and base units. For the field ambulance and sanitary section one can devise a syllabus which will at any rate teach officers and men to act together in a disciplined manner, though much of the work may be only of parade ground value. But it is impossible to train nursing orderlies, except in the wards of a hospital, and with the demobilization of military hospitals the opportunity for this will disappear, unless some scheme can be evolved whereby trainees will do duty in the larger civilian hospitals and then be earmarked for mobilization as nursing orderlies in case of necessity.

For the immediate present we have throughout the country a large number of medical and dental officers,

trained nurses, masseuses and orderlies who have received most valuable training under active service conditions and who could adequately fill all the requisite posts. They have made great sacrifices in their country's cause and now in many cases are finding it hard again to take up the threads of their interrupted civilian avocations. An earnest appeal should be made to them all to give further service to their country by at least going into the reserve and so keeping in touch with the Army Medical Service. And, further, it is to them that we must look to aid in the training of the army of the future, so that the glorious reputation gained by Australia may be still further enhanced.

SECTION OF PUBLIC HEALTH AND STATE MEDICINE.

PRESIDENTIAL ADDRESS.

THE NEW PREVENTIVE MEDICINE.

By J. H. L. Cumpston, M.D., D.P.H.,
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There has never been a time in the history of the world when the opportunities for preventive medicine were so great. With the thinkers of the world dreaming of a future brighter than ever before, with the nations trained to work unitedly for a common purpose, no one can doubt that this actual moment is the sanitarians' great opportunity. But if it be the opportunity, then great is the sanitarians' responsibility. It is the duty of those of us who have chosen this branch of medicine as our life's work, to demonstrate that we are capable of expounding a true gospel of preventive medicine, or, if we fail, then to make way for others more competent.

If the result of the last five years has been to prepare nations for a higher level of common good, it has equally been to enlighten nations in many directions. The soundness of many accepted beliefs, the efficiency of many established practices, the immutability of many conventions have all been brought into question and the perils threatening a nation's existence have necessitated a close and critical testing of all social processes and instruments.

If the soil has been prepared for the seed, then it is our duty as a profession to supply a seed of a sound and tested quality.

It is fitting that we, who aspire to use this opportunity, who dream of leading this young nation of ours to a paradise of physical perfection, should critically examine ourselves and our methods in order to assess our fitness to point to the people the paths they must tread to that paradise. We must ask ourselves: What have we achieved hitherto? What can we legitimately claim to be able to achieve? And not the least must we ask: What self-discipline must we impose on ourselves that we may be fit for the work?

In the field of achievement, it has become fashionable to point to the magnificent success achieved in preventive medicine amongst the armies. Probably, in all this war of wonders, nothing has been more

wonderful. The average age of the combatants was enough to eliminate scarlet fever and diphtheria as serious matters, but never before, in all the history of war, have typhoid, typhus, cholera, dysentery and small-pox been kept at so low a level. This is an achievement, but the same cannot be claimed for influenza, trench fever or trench nephritis.

Wherein lies this difference between success in the one case and failure in the other? The cry of man-hungry commanders for every available fighting man made it certain that no money would be lacking, no effort would be spared to insure the application of all knowledge for the prevention of disease. The lesson here is clear: that, given a sufficient number of the right kind of staff and sufficient money to procure the necessary equipment, disease can be controlled if its nature be known and the correct methods for its control have been determined.

Where control of disease by the army failed, the reason was lack of knowledge of the correct methods of control.

This experiment in preventive medicine—an experiment conducted on a huge scale with a huge success—teaches us that preventive medicine has two phases. These two phases are exact knowledge and effective application of that knowledge by competent men.

The question is frequently heard: If these good results have been obtained in the army, have they also been obtained in the community at large under ordinary conditions of civil life? We, who have been entrusted with this duty, must answer without evasion, the tables of mortality statistics being incontestable witnesses of our efficiency or neglect.

It would naturally be expected that the work of preventive medicine would show its effect most definitely upon the group of infectious diseases.

Typhoid fever has exhibited a steady decline since 1890, the death-rate per 100,000 persons living having fallen throughout the Commonwealth almost uninterruptedly from 37.84 in 1890 to 4.9 in 1918. The number of cases actually reported is not available for this period for all the States, but in both New South Wales and Victoria the incidence of actual cases has declined in the same period at a rate equal to the decline in death-rates. In New South Wales the typhoid case rate per 100,000 of population has fallen from 249 in 1896 to 42 in 1918, the corresponding figures in Victoria being 288 and 51.

Typhoid fever is recognized as being pre-eminently a preventable disease and is almost universally accepted as a touch-stone by which the effectiveness of the most elementary branches of local sanitary effort is judged in any community.

The elimination of typhoid fever from the morbidity returns of the army is hailed as a triumph of applied knowledge. A comparison between the conditions of and results obtained by civil and military sanitation methods will be of value.

The success obtained in the army was achieved by inoculation, sanitary disposal of human excreta, a high grade of general sanitation and by bacteriological examination and isolation of convalescents and suspected carriers.

In civil life in Australia, inoculation, bacteriological examination and isolation are, as a general practice,

¹ Read before the Section of Public Health.

ignored. It will be admitted that the decline in typhoid fever in Australia has been produced by improvement in disposal of human excrete, in sanitation generally and of late years by the exclusion of new strains of *Bac. typhosus*. The persistence of the disease, with occasional local outbreaks of considerable severity and the failure to achieve that complete result obtained under military conditions, are due partly to a failure to utilize bacteriological methods for determining sources of infection, partly to neglect of inoculation and partly to a failure to enforce as completely as war conditions necessitated, or as the existing civil law prescribes, the proven reliable methods of sanitation. For example, the recent survey of the Bowen (Queensland) district showed that of 1,200 properties only 5% had privies which were sanitarily safe.

A most inspiring feature of the military conditions was the complete recognition, particularly amongst the Australians, of the essential need for sanitary cleanliness in the front lines and the consequent development of a strong sanitary public opinion. This education of the community concerned has proceeded amongst the Australian population generally, but, in the absence of the stress of a stern discipline, at a much slower rate.

Diphtheria is another disease which is accepted as pre-eminently a preventable disease. The bacteriology of this disease is known at least as well as that of any other human disease. What has been the result of the application of this knowledge to the control of the disease in Australia? In 1890 the death-rate for the whole Commonwealth was 60 per 100,000. Antitoxin was introduced in 1894 and the use of this remedy had reduced the death-rate at the end of 1895 to 19 per 100,000. Thereafter, until 1906, there was a steady fall in the number of deaths, but from that time there has been, in spite of the use of a specific remedy, a rise in this number, until the death-rate in 1916 equalled that in 1895 and the rate in 1918 was the same as that for 1896. If this were all the story, it would even then be discouraging, but the figures show that the spread of the disease has been uninterrupted.

In New South Wales there has been a steady progress in the numbers of cases reported. In 1900 there were 726, in 1916 there were 6,588 and the increase in the intervening years was progressive. In Victoria and South Australia the same increase has occurred, from 1,680 in 1900 to 6,568 in 1918 and from 400 to 1,469 respectively. This is sufficient evidence of failure to prevent a preventable disease, concerning the epidemiology of which almost everything essential is known.

It is obvious that the attitude of complacency which the introduction of antitoxin induced, must be abandoned and a serious effort to control the disease by scientific application of scientific knowledge must be substituted. There is, for this disease, no source of infection obvious to the general public, such as excreta in typhoid, and the public must be educated in the knowledge and use of the proven methods of control.

We, who are responsible, are obliged to ask ourselves: What serious attempt have we made to use our knowledge for the control of this disease? We stand convicted by the figures of neglect, of ignorance, or of lack of enterprise.

Influenza, scarlet fever and measles form a group which may well be considered together. Influenza, in epidemic form, has received much attention recently from clinicians, epidemiologists and bacteriologists. Our own Australian experience affords much food for reflection and speculation. Undoubtedly, the application of maritime quarantine prevented the entry of the great pandemic wave of the most virulent form of this disease into the Commonwealth, by the crude method of absolute blockade; but, after the less fatal form had manifested itself within Australia towards the middle of 1918, whether by evolution or invasion, it can hardly be claimed that any of the measures which were applied later kept the disease within control. Apart from this question, there were many puzzling phases of the behaviour of the disease in Australia. Why, for example, was the crest of the epidemic wave in the different States at such widely different periods, being in Victoria in May, in Queensland in June, in New South Wales in July, in Western Australia in August, in Tasmania in September, while in South Australia there was no epidemic crest throughout the whole period, the deaths occurring evenly throughout 32 weeks. What was the reason why Victoria, which was first affected, had a death-rate for the whole year of 225 per 100,000, while New South Wales, which was not severely attacked till more than two months later, had a rate for the year of 305 per 100,000? What explanation is there for the curious fact that the behaviour of influenza in South Australia was so different from that in Victoria and the course of both the 1891 and 1919 epidemics in Queensland was fundamentally different from that in New South Wales? Why did the disease occur in waves of varying virulence? Why did it die out suddenly and abruptly long before it had attacked even the majority of the population?

It must be admitted that, at present, no answer can be given to these questions, for the reason that no serious attempt has been made to analyse the data.

Scarlet fever and measles have been occurring in Australia in the form of repeated epidemics for many years. The extensive measles epidemic of 1874-5 was followed by the serious outbreak of 1883-4, again by the epidemic—still well remembered—of 1893-4 and, since that time, there have been recurrent epidemics of varying intensity. Of scarlet fever the same general statement is true. That the fundamental bacteriology of each disease is unknown is true. Therein lies a serious obstacle to effective control, but the prime factor of infection—interchange of buccal and naso-pharyngeal mucus—in each case, is determined. Experience may be summarized. In the case of influenza there has been abundance of deliberate administrative control, without any knowledge of essential data; in scarlet fever and measles there has been knowledge of certain important data without any attempt at administrative control. The record of failure is the same in each case. While a great deal can be done by isolation of the infective person during the infective period and while this should be done by both administrative effort and education of the patient, yet complete success will not be possible until fuller knowledge of the behaviour of these diseases, both clinically and as epidemics, is attained.

This distinction between the disease as it behaves in

the individual patient and as it behaves in the community is not sufficiently recognized. It is not sufficiently recognized that while the sufferer from the disease is the individual, the sufferer from an epidemic is always a community. This is the reason why, in order to diagnose an epidemic, one must collate cases in a community, while to diagnose a disease one need only to collate symptoms in an individual.

During 1918, when "X" disease and encephalitis were receiving popular attention, there was noticed, both by hospital staffs and the profession generally, far more cases than usual of meningitis, Landry's paralysis, of ascending and transverse myelitis and of similar conditions.

Interest was focussed on one type of nervous disease alone and a new disease was defined on a regional basis, without attempt to study the whole of the prevalent disorders, with the object of arriving at some idea of the extent of correlation.

If a disease is to be controlled, its behaviour in a community in the mass must be studied. The significance of the short and long cycles in measles prevalence, the long periods of latency, blazing into a world-wide prevalence of dramatic suddenness and intensity, of plague and influenza must be examined with a view to determining the reasons for their behaviour. Nothing in the present state of knowledge justifies any assumption that the *vera causans* of influenza is in any way related to *Bacillus pestis*, yet the similarity between the behaviour of the fourteenth century pneumonic plague and the 1918-19 influenza is very close. The unprecedented occurrence of epidemic meningitis, of poliomyelitis and of encephalitis between 1915 and 1919, considered with the occurrence of influenza in a phase of virulence not hitherto recorded, cannot be dismissed as unrelated phenomena. It is at least a justifiable working hypothesis that the disordered social conditions of these years have combined to provide conditions favourable to the appearance and spread of epidemic disorders and it is justifiable to assume that such will continue to appear or reappear until a new social equilibrium is established.

Can we say why epidemics appear and disappear? This has been the subject of considerable investigation by epidemiologists. Some find the explanation in fluctuations of the amount of susceptible material, each epidemic wave either killing off or immunizing the new crop of young humans which has grown since the last wave. The mathematicians, such as Brownlee, Pearson and the great Farr, have examined the course of recorded epidemics according to established mathematical processes. Their conclusions have great importance. It has been repeatedly stated, until it is now widely accepted, that epidemics frequently end because all susceptible persons have been attacked. Mathematically, it has been demonstrated that the want of persons liable to infection is not the cause of the decay of epidemics. The course of epidemics, and this is general without reference to any particular virus, is expressed mathematically as follows:

That by some means or other the organism acquires very high infecting power, possibly as a result of some pseudo-sexual process and this exalted infecting power is lost at a rate identical with that expressed by the formula for geometrical progression.

Naturally, the infectivity thus acquired varies around a mean.

The period during which highly infective organisms are liberated, occupies only a small portion, not exceeding one-fourth, of the total epidemic period. The mechanism by which the power of infecting is lost has not been the subject of any assumption hitherto. The suggestion advanced by Brownlee is that the power of proliferation, enhanced in some way at the beginning of the epidemic, gradually decreases and that, as the organism loses its power of proliferation, the epidemic dies out. An analogy is offered: if the growth of an embryo be traced microscopically, many more cells in proportion to the total number of cells in the embryo may be seen undergoing the process of division in the early days of embryonic growth than in the later stage.

Another view, which is held by competent authorities, challenges the doctrine of invariable specificity of disease virus and accepts the probability of bacterial variations or, in short, evolution of bacterial types in a succession, the rapidity of which evolution bears the same ratio to the rapidity of multiplication of bacteria as the rapidity of evolution of higher biological types bears to their generation time.

Such an hypothesis attributes the cessation of an epidemic neither to the exhaustion of susceptible material, nor to the efforts of the sanitary authorities, but to the decline in virulence of the infecting organism.

The experience of influenza at quarantine stations has, however, largely supported this hypothesis and enabled a definite epidemic prognosis to be made under certain conditions. It was found that, on many ships, the epidemic ceased at approximately the same stage, irrespective of a large residual unattacked majority on the vessel, or of any measure of administrative control, however complete.

One important variation invalidated this general rule. On vessels whose coloured crew was obtained from Pacific islands, the epidemic did not cease till every coloured person was attacked. This experience was so much at variance with the experience on vessels with an European population that the deduction that personal susceptibility played some part could hardly be avoided.

It is of primary importance that this issue should be closely studied. If the decisive factor in an epidemic be the resistance of the population attacked, then measures must be devised to enhance that resistance. If, on the other hand, the inherent vigour of the virus be the only factor, then all agencies that affect the virus must be ascertained and enlisted for the campaign against the disease. A disease agent may have its virulence increased by symbiosis, as has been suggested, for example, in the case of typhoid or cholera under conditions of insanitation, or of organisms which select the naso-pharyngeal entry under disordered conditions of the mucosa of this region. It may ultimately be found that inoculation with specific vaccines is the most practicable means of increasing the resistance and diminishing the virulence of the infecting agent in the one operation.

As is well-known, by animal passage a more virulent strain of organism can be selected. Evidence is, however, not lacking to show that this passage may be overdone and that by it injury to the vitality of

the organism sufficient to influence its pathogenic power may be produced.

If over-selection may result from passage, one would naturally suppose it would occur more quickly on passage through immunized animals, so that a vaccine might not only protect the individual, but induce rapidly such over-selection as to rob the organism of its virulence. This I believe to have been the result of the use of vaccine in influenza, in those places where its use was general.

It may be urged that all the present activities of health departments are destined, directly or indirectly, towards either of those ends, of increasing resistance and diminishing virulence of pathogenic organisms, but such a method of dismissing a matter of fundamental importance is too much like the use of the shot-gun prescription in a malady of the body politic.

It must be admitted that these three diseases—*influenza*, *measles*, *scarlet fever*—which have caused an appreciable number of deaths and a still greater amount of troublesome or disabling sequelæ in the Commonwealth, are not being controlled. This is a failure in our health system which arises largely from a want of knowledge of essential facts. It indicates plainly the great need for study of these diseases in their epidemic form within the Commonwealth, directing special attention to local variations from the general epidemic types seen in other countries.

Almost one-sixth of the total deaths in 1918 resulted from pulmonary tuberculosis, pneumonia, influenza, diphtheria and whooping cough, all of them diseases in which the principal, if not the sole, method of transmission is respiratory tract mucus.

Not only is this loss of life resulting from the infective diseases, but the tables of mortality in the Commonwealth reveal that this country is losing its human population from five principal causes—*cancer*, *tuberculosis*, *organic disease of the heart*, *congenital debility* and "*hæmorrhage and softening of the brain*."

There is hardly any member present who will seriously contend that the knowledge and opportunities of the practising profession or the resources of the nation are being utilized to the full to control these diseases. The time has arrived when the conception that preventive medicine is limited in its scope to the zymotic disease group, must be abandoned, for to-day preventive medicine includes within its scope all measures which may prevent, mitigate or defer all diseases and disorders of whatever kind.

One fact alone must arrest the attention of the profession: one-twelfth of the total deaths at all ages in the Commonwealth occur in the first month of life. This unhappy condition has recurred, without any change, for many years and nothing whatever has been, or is being, done with the specific object of rectifying this.

In New Zealand, out of 135,282 men of military age examined when called up for compulsory military service, 57% were rejected as unfit. No figures are available to indicate the position of the Commonwealth in this regard.

It is the plain duty of this Congress to examine the whole question of preventive medicine, especially

as it is becoming daily more apparent that the national consciousness is awakening to the need for close examination of the problem. While this is true, it is equally true that the past five years have shown in an unmistakable way that human life is held to be the cheapest commodity in all the national resources.

There have been wheat pools, wool pools, butter pools to insure that these national assets were conserved to the best advantages, but there has been no thought of baby pools or women pools to preserve the human capital.

The suggestion of dishonest trafficking in public funds leads to a Royal Commission, but an outbreak of meningitis amongst troops arouses no special interest.

A rise of 15% in the cost of living produces the appointment of prices commissioners of various kinds, but an increase of 35% in the numbers of cases of diphtheria in a State causes no single ruffle of the placid calm.

A reduction of 30% in the trading hours of the shops where alcohol is sold, causes a disturbance which threatens the fate of Governments, but the prevention of disease and death directly due to alcohol is to-day nobody's business.

On active service, 59,274 men died and their wives are provided with pensions, 55,000 men were infected abroad with venereal disease and no one knows how many others in this population are so infected, but their wives and children are not afforded either adequate or effective protection.

That is the measure of the public interest in preventive medicine. What is the reason? One prominent public man, in a moment of candour, explained that "there were no votes in public health." This may possibly be correct and, if so, while the present system of democratic government continues, the acts of Government represent the will of the people. If the people are apathetic, why are they apathetic? It is surely because of their ignorance, because they have not learned that diseases are preventable from those who know this, in other words, from ourselves.

The medical profession must, in honesty, accept a large share of blame for the present status. Let me quote from a public utterance by Dr. F. S. Hone:

"We have a medical conscience regarding sepsis, we have not yet developed a medical conscience as regards work done for the State . . . as a whole, the medical conscience at present is almost as insensitive to shame at epidemics in the State as it was in pre-antiseptic days in relation to epidemics of sepsis in a hospital. Further, while its honourable traditions and its whole scheme of education will ever keep the conscience of the individual practitioners tender as regards their relation to their individual patients, there is urgently needed a quickening of both the individual and collective medical conscience in regard to new obligations resting upon it, arising from the altered outlook of the State on medicine and medical problems."

Lest there should be misunderstanding, let me state plainly that I have already endeavoured to make clear that we officials, practising preventive medicine as a specialty, are not outside the range of this condemnation. From lack of knowledge, lack of opportunity, lack of official support and possibly

also lack of initiative, we cannot point to a record of great achievements. I am bound to say, however, in all sincerity, that I believe our greatest reason for failure is a general absence of stimulus and support from the collective medical profession. I think I am correct in stating that no State Branch of the British Medical Association has, amongst all its committees, a committee on preventive medicine. Such a committee, if active, could not fail to be of immense help to the officials at the health departments, or to secure the introduction of many overdue reforms.

In other directions, however, the practising profession indicates its attitude to preventive medicine. It is legitimate to ask: How many members of this Congress, in their practices, have bacteriological examinations of faeces and urine made before they release their typhoid patients from their care; or how many insist upon the requisite number of examinations in diphtheria before they allow a child to return to school?

There are still many medical men in practice who advise parents to infect the younger children with measles, so that they may "get it over," or whose whole efforts at preventive medicine consist in the advice to burn a pound of sulphur in a room to disinfect it—a procedure, as generally performed, infinitely less valuable than Lister's carbolic spray. The notification of tuberculosis is frequently made simultaneously with the issue of the death certificate, while, in those States where there is a *Veneral Disease Act*, the profession generally can hardly be described as having the successful working of the Act as one of their cherished objectives.

A search of the available records appears to justify the statement that it is more than thirty years since the Association in any State drew attention to the need for careful supervision of the milk supply of an Australian town, yet the conditions under which metropolitan milk in Australia is delivered have, for years, called loudly for reform.

The illustrations I have given are mainly within the scope of the familiar conception of public health as relating to infectious diseases, but the profession must face to-day an entirely new conception of preventive medicine. This may be sufficiently indicated by the programme of the newly created British Ministry of Health. This programme includes the study of, or action in connexion with, heredity and race, maternity, infant welfare, school hygiene, healthy environment, industrial hygiene, prevention and treatment of infectious disease, prevention and treatment of non-infectious disease, including heart disease, rickets, mental disease, dental caries, indigestion and alimentary disease and preventive surgery, public education in hygiene and research in relation to preventive medicine. This programme, in short, has regard to "that interpretation of preventive medicine, the aim and purpose of which is the removal of the occasion of disease and physical inefficiency, combined with the husbanding of the physical resources of the individual, in such a way and to such a degree that he can exert his full powers unhampered, over a reasonably long life, with benefit and satisfaction to himself and all concerned. Its object is to prevent not only the spread of disease, but its occur-

rence, to remove its occasion. Its spirit must not be confined to sanitation or so-called 'public health' alone, but must pervade and inspire all branches of medicine" (Newman).

The primary objects of preventive medicine are to transfer as many deaths as possible from the earlier to the later periods of life, to prevent the larger mass of non-fatal illness, which, from the point of view of the community, is infinitely more serious than early death and to raise the general standard of health of the population.

I have stated these ideals, not because they are ideals, but because they are the official programme of the Ministry of Health of England and a vigorous campaign in each branch is now in full operation. I have taken this occasion to emphasize it, because there are many indications that similar action in this country will not be long delayed and that, when it does come, it will be a matter of vital interest for the whole medical profession.

There is every reason why this should and must be so. The essential principles of a campaign against disease may be briefly stated: the measures of control must be accurately known and their application must be at the point where the disease exists, *i.e.*, in the patient and his immediate surroundings. There is now proceeding a convincing demonstration of both these phases in the hookworm campaign in this State. So long as any attempt to control the disease was operated from Brisbane or Townsville, so long was any measure of success postponed. When a sufficient staff, with the necessary knowledge, travelled the country and dealt with the disease *in situ*, then and then only did full knowledge and the dawn of success appear.

An attempt to control a State-wide epidemic of diphtheria from Sydney, Melbourne or Adelaide is not unlike an attempt at administering chloroform by post.

The two vital elements—acquisition and promulgation of exact knowledge and local application of that knowledge—represent roughly the true functions, respectively, of the health department officials and of the practising profession.

I hold firmly that preventive medicine cannot be a success until each medical man in practice is enrolled as an effective and active unit. Sir George Newman, who is Chief Medical Officer in the Ministry of Health of England, says: "The foundation of a medical service is the medical practitioner. If he is competent it has the first surety of success; if he is ineffective or ill-equipped, it must fail."

The medical practitioner cannot escape his responsibility to the nation. He has the knowledge, or is, at least, in the best position to acquire the knowledge, he has the patient under his hand from first to last, he has the confidence of the patient and his friends and of all conceivable agents he is in the best position to apply effective measures of preventive medicine. He must accept his responsibility and must accustom himself to a state of mind in which he would feel the same shame at a secondary case of infectious disease in a family amongst his patients as he would at sepsis after an operation. The aseptic conscience must be sensitive to all forms of preventible disease, not merely those due to errors in surgical technique.

If preventive medicine in this country is ever to emerge from its present position of infantile impotence, the present system of so-called public health administration must disappear. In the army, for the preservation of health, it was considered necessary to have one medical man for every 500 men. In Australia, the number engaged seriously on public health duties is approximately one to every one hundred thousand. The proportion necessary in the army must surely be necessary amongst any general community.

The new system of preventive medicine must have a central staff, adequately equipped with financial resources, with laboratories and with field staffs trained both for investigation and for activity at spots where reinforcements are required. The central staff must be relieved of many functions of sanitation, of the drains and scavenging order, and the local governing authorities must take up a far greater range of duties in this direction than formerly.

The standard should be a fixed "normal death-rate" or "normal sickness-rate," computed on an accurate mathematical basis, and any district in which the sickness- or death-rate in any year exceeds its own normal should become the object of solicitous attention and discipline by the central authority until its rate again falls to normal—a sensible profit and loss method of dealing with the human assets.

Finally, the first line of defence must be the general practitioner, who must, under the direction and supervision of the trained central and district staffs, accept the responsibility for all those measures of preventive medicine which can be applied in the home and must be prepared to accept responsibility for failure to require or carry out prescribed or obvious measures of prevention. This means a greatly increased range of duties performed for the State and may involve possibly a readjustment of financial values of professional sources in many directions.

Briefly, the health department must say what should be done and the local government authorities and the medical profession, each in their sphere, must do it. The central health authority should have power to see that they do their duty and, clearly, the association between the preventive and curative branches of the profession must be intimate.

We stand at the gates of opportunity. That disease can be prevented to a degree far beyond anything yet attempted in this country we all know. That it should be so prevented is obvious, for of all countries in the world Australia can least afford to waste population or physical efficiency. Are we, as an enlightened profession, to take the lead and show how to make preventive medicine an administrative reality on a scientific and equitable basis, or are we to wait until public opinion produces a scheme which may be unscientific and ineffective? That the impulse is inevitable from one or other source there can be no reasonable doubt.

I would urge therefore that this Congress take this matter of preventive medicine into earnest consideration as one affecting urgently and seriously all branches of the profession. In default of any suggestion offering better promise of immediate

action, I suggest that this Congress requests the Commonwealth Government to appoint immediately a Royal Commission, on which there shall be medical representatives in whom the profession has confidence, to report as to the most effective way of making preventive medicine a reality in Australia.

Reports of Cases.

HEREDITARY POLYDACTYLISM.

By L. Crivelli, M.B., B.S. (Melb.), M.D. (Paris),
Albert Park, Melbourne.

The following is an interesting case of hereditary polydactylism, extending through five generations.

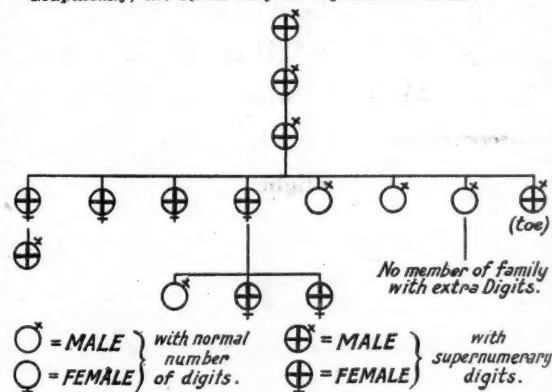
Last June Mrs. S. gave birth to a female child presenting an extra digit on each hand, attached by a narrow pedicle to the middle of the ulnar or inner surface of the first phalanx of the little finger. The free end was shaped like a normal finger, with a perfectly formed nail, the other end, rather thicker, being attached by the short thin pedicle. It contained two little nodules of cartilage, representing, no doubt, the phalanges.

Mrs. S. has had three children: one girl, who had the extra digit on one side only; one boy, without any extra digit; and one girl with the double deformity.

Mrs. S. herself had the double deformity and she had three sisters who had it, three brothers without it and one brother with an extra digit on one foot. One of the sisters has a boy with the deformity. One brother has one or two children without.

The father of Mrs. S. had the deformity and so did her grandfather and her great-grandfather. She does not know of any other members of the family.

Graphically, the series may be represented thus:



Reviews.

THE PSYCHOLOGY OF THE DOCTOR.

"The Young Physician," by F. Brett Young,¹ is a powerful and somewhat sombre study of a dreamy youth who, after passing through a midland public school, drifts rather than steers himself into medicine. Mr. Brett Young has for some years taken a position as a brilliant and rising novelist. His "Crescent Moon" was a rather grim and caustic sketch of life in Central Africa; he himself seemed to consider it rather of the "penny dreadful" order and to be ashamed of it; but his description of the book in the preface was far from accurate. One welcomes the present much more kindly and human study. Every doctor will be glad to live his own student life over again; to see how the character of

¹ The Young Physician, by F. Brett Young; 1919. London: Collins; Crown 8vo., pp. 485. Price, 5s..

the hero is gradually moulded by the exigencies of the profession; how he begins as a simple dreamy youth, timid and self-conscious, and how he slowly learns that there can be no such thing as false shame or self-consciousness in medicine, but only love and divine pity, which are none the less present, although it is necessary to cultivate an apparent callousness and indifference to suffering ridiculously foreign to the real feelings which actuate the doctor. Mr. Brett Young has apparently been through the mill himself; he views the profession from the inside, yet with an objectivity which gives a surprisingly real appearance to his portrait. He seems to draw every aspect of medicine; from the first dissection to the dispensary of the shilling doctor and even the pornography to which certain unscrupulous publishers subject us is not left unmarked. Any medical man who wishes to revive old memories and to appreciate the real inward truth of what is after all the noblest and greatest of callings, should read this book. The best feature about it is that there is not a single falsely sentimental touch; it is all told with something of the hard, clear mind free from mawkishness, which we all endeavour to cultivate.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

An adjourned meeting of the Senate of the University of Sydney was held on August 16, 1920, at University Chambers, Phillip Street, Sydney.

On the recommendation of the committee appointed to make recommendations as to the steps to be taken to fill the Associate-Professorship of Psychology, it was resolved: "That the Associate-Professorship of Psychology be offered to Dr. H. G. Lovell." In the course of the discussion it was stated that the work of the Chair of Normal Psychology would provide a valuable introduction to the advanced teaching in psychiatry contemplated by the Senate under recent resolutions; and that Dr. Lovell had had special training in the anatomical and physiological basis of mental phenomena by studying in the University laboratories which would make him peculiarly fitted for giving instruction bearing upon processes which underlie psychological phenomena both normal and morbid.

On the recommendation of the Professorial Board the accompanying resolutions passed by a conference of representatives of Australian universities held in Sydney on May 26, 27 and 28, 1920, were adopted.

These recommendations include *inter alia*:-

Relation of Australian Universities to the Universities' Bureau of the British Empire.—That this Conference recommends the Australian universities to continue for the present their subscriptions to the Universities' Bureau of the British Empire; and to request their delegates at the Congress in 1921 to support the proposed reorganization of the Bureau as set out in the report of the special committee of 1919-1920.

Entry on Courses.—That the Australian universities be recommended to refer to the Standing Advisory Committee the following subject, with a request for an early report: Matriculation qualifications now required in the Australian universities, and any obstacle that exists to transference of students at equivalent status, with suggestions for improvement of present conditions.

Co-ordination of Degrees.—That the Standing Advisory Committee be asked to report on the questions of the improved co-ordination of degrees and the construction of lists of post-graduate studies to be offered by the Australian universities, and fees to be charged.

Extension of 1851 Science Research Scholarships.—That this Conference strongly urges the Royal Commissioners of the Exhibition of 1851 to give favourable consideration to the applications of the Universities of Queensland, Tasmania and Western Australia for participation in the benefits of the 1851 Science Research Scholarships.

Customs Duty on Scientific Apparatus.—That this Conference requests the several universities to make representations to the Minister for Customs in order that provision may be made for the exemption of the Australian universities from the payment of the 20%

duty on scientific instruments and apparatus which are imported from allied countries because they cannot reasonably be manufactured or produced within the Commonwealth.

That the Following Questions be Referred to the Standing Advisory Committee.—(a) Uniformity of practice in regard to university titles, tenure, emoluments and duties. (b) Appointment of graduate study advisory boards for advice to travelling scholars. (c) Recognition of Australian matriculation and other academic status by the Universities of the United Kingdom. [The attention of the Committee is drawn by Conference to the debate which took place at the Interchange Committee, held in England in July, 1919.] (d) Consideration whether it is advisable to send an Australian Universities Mission to the United States of America. (e) Relationship of universities to industry. (f) Relationship of State and university.

Extension of Medical Course to Six Years.—That the question of extending the curriculum in the Faculty of Medicine from five to six years be referred for consideration to the medical faculties of the universities concerned.

A letter from the General Medical Council of the United Kingdom on the subject of the identification of registered medical practitioners by means of finger prints was referred to the Medical Board of New South Wales. The subject had been suggested by the University to the General Medical Council on the initiation of the Medical Board, which considered that identification by thumb prints was a more scientific and better means of identification than that by photographs, which might after a time be difficult of recognition.

THE FUTURE OF THE CONGRESS IN AUSTRALASIA.

At the final meeting of the Australasian Medical Congress, Brisbane, 1920, held in the Examination Hall of the Central Technical College on August 28, 1920, the President announced the result of the ballot taken to decide the future of medical congresses in Australasia. It was determined by a very large majority that the Australasian Medical Congress should cease to exist and that the Executive Committee of the Eleventh Session should take the steps necessary to wind up its affairs. The surplus funds of the Congress, if any, are to be handed over to the Federal Committee of the British Medical Association in Australia, to be applied for the purpose of organizing medical congresses in the future. It will be understood that the Federal Committee has invited the co-operation of the New Zealand Branch of the British Medical Association in order to preserve the Australasian character of future congresses.

A special number of *The Medical Journal of Australia* will be devoted to a summary of the proceedings of Congress.

A PHOTOGRAPH OF MEMBERS OF CONGRESS.

A group photograph of the members of the Australasian Medical Congress, Brisbane, 1920, may be obtained from the photographers, Regent Studios, next to Finney's, George Street, Brisbane, at the following prices: Mounted, 17s. 6d., postage 1s. 9d. extra; unmounted, 15s. 6d., postage 9d.

We have been asked to announce that a complete panoramic view of Brisbane (as presented to the Prince of Wales) may also be obtained from the Regent Studios at 10s. 6d.; postage 1s.

We are informed that Messrs. Burroughs Wellcome & Company have determined to supply the Wellcome brand of sera, vaccines and tuberculin at the same price as the analogous products from the Commonwealth Serum Institute are offered to the medical profession. We learn that this action will involve the Company in a considerable loss. They are, however, prepared to bear this loss in order that those practitioners who have hitherto used their products to advantage, may continue to do so without incurring additional expense.

The Medical Journal of Australia.

SATURDAY, SEPTEMBER 4, 1920.

The Australasian Medical Congress.

For the second time the members of the medical profession in Queensland have prepared an intellectual feast for their Australasian colleagues. The work of preparation was interrupted at an early stage. For long years no thought was given to this most valuable institution for the interchange of views on medical subjects. The continuity was disturbed both by time and by distraction. It was consequently more difficult when peace returned to pick up the threads and to infuse enthusiasm into the affairs of Congress. The events of the years following the tenth session gave the present session a distinctiveness as compared with all its predecessors. On numerous occasions we have referred to it as a post-war congress. We have even ventured to express the opinion that this character of congress might have been accentuated and that the opportunities might have been more fully utilized had the site of meeting been transferred from Brisbane to the headquarters of the Australian Army Medical Corps. There were, however, many objections to the adoption of this course and not a few diplomatic pit falls. Had it been otherwise, the gathering might have been larger and perhaps a constructive policy in regard to the reorganization of the Australian Army Medical Corps might have been put forward with the support of a greater weight of medical opinion at its back. There is, however, no cause for regret. The members congregated in Brisbane have displayed energy for serious work, as well as enjoyment of complete relaxation. In each section some advance has been registered. Many new ideas or fresh application of established doctrines have proved anew that a congress has a high scientific value.

At every congress much time is taken up by the reading of presidential addresses. This time-honoured custom has advantages and disadvantages. The fact that the addresses are immune from criticism during the course of congress has two effects. In

the first place it impels those occupying the envied positions of president of congress or of presidents of sections of congress to avoid controversial matter and consequently to reduce the speeches to records of past achievements. In the second place the addresses not infrequently convey to the public, both lay and medical, a false impression by reason of the authority attaching to the persons delivering them. In the majority of instances the presidents have avoided these dangers by the skilful application of expert knowledge and by the wise infusion of a diplomatic reduction of self.

In the current issue we publish the address of the Honourable W. F. Taylor, M.L.C., President of Congress, and the addresses of Colonel R. J. Millard, C.M.G., C.B.E., President of the Section of Naval and Military Medicine and Surgery, and of Dr. J. H. L. Cumpston, President of the Section of Public Health, all of which were delivered before full congress. The President of Congress has raised many issues all full of interest to the community and many full of possible dangers. The subject of the treatment of neuroses by suggestion and its allies, hypnotism and psycho-analysis, is essentially a medical one. In the Section of Neurology the considered opinion of those who have made these subjects their life study, has been brought forward. The President dared to tread on more dangerous ground when he approached the subject of nationalization of the medical profession. This matter has been before the profession in many forms and in different guises for several years. Unanimity of opinion on so nebulous a thing as nationalization cannot be attained, for no two people mean the same thing when using the expression. It is essential, however, to emphasize with directness that the British Medical Association in Australia has adopted as a definite policy from which there may be no departure, that third party intervention between a practitioner and his patient is inadmissible. That the collaboration and assistance of the general practitioner with the health authority should be enlisted in a serious and comprehensive campaign, aiming at the prevention of disease, is a different matter. Dr. Taylor has lightly touched the fringe of the subject and has dealt with broad principles. Dr. Cumpston has approached the problem with a determination to find a practical solution,

with a fixed purpose to delve deeply into causes and to build up a sound edifice of preventive work.

The presidents of sections have the task of giving a lead to the members in their respective sections in matters requiring especial study and elucidation. No more important task awaits performance by the medical profession than the reorganization of the Australian Army Medical Corps. In leading Colonel Millard has proved himself a master. He has exercised caution and circumspection in the avoidance of too dictatorial a tone, but by giving his experience and ability rein, he has performed a signal service to the Commonwealth. From his utterances a beginning has been made. There is still much information needed, much co-ordination of ideas to be carried out. On this beginning it will be possible to formulate an organization which will have the great advantage of having been founded on the experience of actual achievements in the field and at the base and of real failure.

The fuller story of the Brisbane Congress will be told in our columns in the immediate future. It is a valuable record and its lessons should be heeded.

CHRONIC NEPHRITIS.

Within recent years various endeavours have been made to arrive at a better understanding of the impairment of excretory function which results from chronic disease of the kidney, and to place the concept of renal insufficiency upon a more scientific basis.

Formerly the accepted classification of chronic nephritis was based in part upon clinical observations and in part on the evidence of pathological changes found *post mortem*. Sufficient attention has not been given to the estimation of the functional capacity of the kidney, which can be satisfactorily investigated only by the correlation of the results of clinical observation and biochemical examinations. In a recent article dealing with the investigation and treatment of nephritis, Drs. H. Maclean and A. E. Russell¹ summarize the specific functions of the kidney under three headings:—(i.) Removal of waste nitrogenous products of metabolism, such as urea, uric acid, creatinin, etc.; (ii.) Removal of acid products from the body; (iii.) Maintenance of the necessary concentration of salts in the body fluids and tissues.

It has been shown that in severe cases of chronic interstitial nephritis there is a definite retention of nitrogenous waste products in the blood, as well as a diminution of the acid excreting function of the kidney. Defective excretion of nitrogen causes an increased concentration of such bodies as urea and

uric acid in the blood, which has been characterized as renal inefficiency of the azotæmic type.

In this type salt and water are freely excreted and there is little or no oedema. Cardio-vascular changes become marked together with a tendency to uræmia.

In parenchymatous nephritis the excretion of the necessary amount of salt or of water is deficient, but there is not the marked retention of nitrogenous waste products in the blood. There is a large amount of protein excreted in the urine which, together with the development of oedema and ascites, constitutes the hydræmic type of renal inefficiency.

In this type of disease cardio-vascular changes are less marked and the liability to uræmia less frequent.

For the purpose of arriving at a conclusion as to the actual excretory capacity of a diseased renal organ, it is obvious that more exact information is required than that offered by the discovery of protein and tube casts in the urine, or the mere quantitative estimation of the urine voided. For clinical purposes three tests may be readily employed:—(i.) estimation of the urea in the blood, (ii.) the urea concentration test recently introduced by MacLean and de Wesselow, (iii.) the diastatic activity of the urine. It has been found that in healthy individuals the blood urea varies from 15 mgr. to 40 mgr. per 100 c.c.m.. When the kidney is unable to perform its normal work of urea excretion, there is an increase of urea in the blood. The actual amount of urea excreted in the urine *per diem* may be, even in very severe cases of chronic nephritis, as much as that of a normal individual on a similar diet. The difference is that the patient suffering from interstitial nephritis requires a much higher concentration of urea in the blood in order to accomplish this elimination. In severe cases the blood urea may reach 200 to 300 mgr. per 100 c.c.m. of blood. Thus the concentration of blood urea is an indication of the efficiency of the kidney; the more severe the impairment of renal function, the higher is the concentration of blood urea.

It has been stated that the amount of functionally active tissue of a normal kidney is so greatly in excess of normal requirements that one fourth of this amount of healthy renal tissue is sufficient to effect adequate elimination. It is, therefore, concluded that an appreciable increase of blood urea indicates that less than one-fourth of effective renal tissue remains. The estimation of blood urea can be readily performed by a modification of the method of Van Slyke devised by MacLean and de Wesselow. The urea is converted into ammonium carbonate by the action of urease. In the presence of alkali ammonia is liberated from the ammonium carbonate and is passed through a standard solution of acid by a current of air. From the amount of acid neutralized the amount of urea is calculated.

For the estimation of renal efficiency in cases in which the morbid process in the kidney has not advanced to such an extent as to cause an increase in blood urea, the new urea-concentration test is advocated. This depends upon the fact that patients in whom the kidneys are defective, are incapable of passing urine with a high concentration of urea even after a large dose of urea has been taken by mouth.

¹ *Lancet*, June 19, 1920.

The degree of concentration of urea in the urine appears to be in direct relation to the involvement of the kidney. The urine of a normal person passed one or two hours after the oral ingestion of 15 gm. of urea should contain 2% to 4% of urea. In patients suffering from nephritis the urea percentage is commonly much less, the diminution depending on the gravity of the condition. If below 2% the condition is unsatisfactory. Moderately severe cases of nephritis are commonly found to show urea concentration not more than 1.4% to 1.5%.

The urea excreted is estimated by the ordinary hypobromite method of Gerrard. The diastatic test depends on the presence of diastase in the urine. Normally the blood contains a definite amount of diastase; when the kidneys are efficient, a constant quantity is excreted daily. In cases of renal disease the amount excreted is lower, the diminution depending on the degree of deficient renal activity.

The routine clinical application of such tests of efficiency in patients suffering from renal disease should lead to a more exact classification of these cases and should make it possible to forecast more accurately the prognosis. These investigations are also likely to have a very definite bearing upon the treatment of such cases. It has been found that the oral administration of large doses of urea to patients suffering from the hydræmic type of renal disease has had the effect of promoting free diuresis and causing ascites and œdema to disappear.

The question of the exclusion of protein from the dietary as a matter of routine in cases of parenchymatous nephritis may also require revision. It becomes questionable whether the rigid restrictions of diet usually enforced are in all cases necessary or advisable. It is possible that the amount of protein allowable in any given case may come to be regulated by the degree of retention of nitrogenous products found in the blood. These investigations give promise of a decided advance in the rational treatment of patients suffering from chronic nephritis.

DIFFERENTIAL DIAGNOSIS OF ENCEPHALITIS LETHARGICA.

As the causal organism of this disease has not as yet been definitely isolated and as there is at present no specific diagnostic test, the diagnosis is frequently beset with considerable difficulty. Dr. Kenelm Winslow¹ points out that uncertainty is particularly likely to arise since other sporadic infections attack the same regions as those affected by the epidemic form of encephalitis. Moreover, while the infection of epidemic encephalitis is particularly apt to assault the cerebral basal ganglia and the nuclei of the pons and medulla, no part of the nervous system is wholly exempt, as is shown by the clinical manifestations of the disease and the findings at autopsy. The classical syndrome of encephalitis is characterized by a tetrad of symptoms: weakness, fever, lethargy and cranial nerve palsies.

In cases of moderate severity the patient may be observed to become gradually weak, drowsy and apathetic, with low irregular fever ranging from 37.5° to 39° C.; headache may be persistent, with

occasional nausea and vomiting. In other cases pain in the limbs or abdomen may mask the other early symptoms and lead to the diagnosis of influenza or rheumatism.

In typical cases the face becomes expressionless and mask-like and the intellectual processes dulled. Diplopia is commonly noted. The mental state varies from moderate drowsiness to marked stupor with mental confusion or there may be delirium. The pupils are often sluggish in their reaction to light and the eye grounds may show œdema of the retina or choked discs and retinal hæmorrhages. Coarse tremor or choreiform movements of the arms may develop or spasticity of one or more limbs. Difficulty in swallowing is not infrequent. Partial facial paralysis has been recorded in many cases.

Paralysis may occur as a mono- or hemi-plegia, but more commonly there is a paresis which varies in intensity from time to time. Symptoms of meningeal irritation may arise. Tendon reflexes are variable, being sometimes increased, at other times absent. Polyuria is frequently observed, which is stated to be due to involvement of the posterior lobe of the pituitary body. There is a particular group of cases described under the name *encephalitis myoclonica*, in which clonic spasms of the muscles of the limbs or abdominal wall frequently accompanied by severe pain are the characteristic features.

In cases of encephalitis the leucocyte count is generally normal, or may show a moderate increase; the cerebro-spinal fluid is clear sterile on culture, with cellular count varying from normal to slightly or markedly increased. It may or may not be under increased pressure.

Recovery may be rapid in mild cases, or extend over months in severe cases. The mortality has been roughly estimated at 40% and upwards.

The disease being so protean in its manifestations and definite and specific characteristics being frequently absent, it is obvious that the diagnosis may be a matter of unusual difficulty.

Amongst the morbid conditions commonly liable to cause confusion, meningitis, cerebral syphilis, the cerebral or cerebellar type of poliomyelitis, Landry's paralysis, cerebral hæmorrhage and tumour may be mentioned.

Cerebral syphilis in particular may simulate very closely the clinical picture of encephalitis, and is to be differentiated by examination of the cerebro-spinal fluid removed by lumbar puncture and by the Wassermann reaction.

Meningism in acute infective fevers and botulism resulting from food poisoning have sometimes to be differentiated from the early acute stage of encephalitis. It must be admitted that the diagnosis of the disease is often a matter of considerable difficulty and is not infrequently only established indirectly by the exclusion of other morbid conditions, of which the signs and lesions are more fully understood and can be more readily demonstrated.

It is with regret that we have to announce the death of Dr. Neville Griffiths, of Balmaln, Sydney, on August 25, 1920.

William Broad, Esq., M.B., Ch.B., 1899 (Univ. Glasg.), of Rosedale Avenue, Manly, has been nominated for re-election as a member of the New South Wales Branch of the British Medical Association.

¹ North West Medicine, March, 1920.

Abstracts from Current Medical Literature.

SURGERY.

(84) Accidents in Ligating the Common Carotid.

J. Homans (*Annals of Surg.*, June, 1920) gives details of the death following ligation of the right common carotid of a young man who had been shot in the neck. The operation was performed under chloroform anaesthesia and there were some cyanosis and respiratory difficulty. Flaccid paralysis developed and 18 hours later the patient died. At the autopsy particular attention was paid to the circle of Willis, but nothing abnormal was discovered except that the internal carotid, vertebral, posterior cerebral and basilar arteries were somewhat smaller than usual. No study of the blood pressure had been made before the operation. Makins has raised the question whether local occlusion of the principal blood supply is alone responsible for the extreme cerebral anaemia in these cases and suggested the possibility of a superadded vascular spasm preventing influx of the blood to the part. If this is the case, a record of the blood pressure in these cases should be of primary importance. Hemiplegia developed in 21% of the patients in whom Makins ligatured the common carotid for secondary haemorrhage. He points out that the majority of the cerebral accidents occur after the early operation for haematoma or haemorrhage. Whereas deliberate ligation of the carotid artery in individuals in reasonable health is attended by a low mortality, the mortality is high when the operation is performed hurriedly for wounds. He, therefore, opposes early operation unless the conditions are such as to be favourable. In the case recorded the writer thinks that a low blood pressure rendered ligation particularly dangerous. He also thinks that ligation of the jugular vein should be carried out either before or at the same time as the ligation of the artery.

(85) The Surgical Significance of Jaundice.

C. H. Mayo, discussing the surgical significance of jaundice (*Surg., Gynec. and Obstet.*, June, 1920), points out that 50% of the cases are due to obstruction of the common duct by stone, 20% to obstruction of bile in the liver or to catarrhal or infective conditions, 15% to cancer (half of these from cancer of the liver) and 8% from cirrhosis, usually with ascites. The old classification of Courvoisier remains roughly true, that in 84% of cases of stone in the common duct the gall-bladder is atrophied, while in 92% of cases of biliary obstruction due to lesions of the ampulla or pancreas there is a dilated or enlarged gall-bladder. Long-continued jaundice prolongs the coagulation time even to 25 minutes and in some cases to an hour. The best preventive treatment is the transfusion of acceptable blood. Cholecystectomy

is the best treatment for gall-bladder disease, especially with stone in the common duct, the cystic duct being then split up to allow exploration with pliable metal spoons or bulb-tipped probes. The too radical removal of the gall-bladder and cystic duct with accidental section of the common duct is a serious and not uncommon cause of jaundice, as is also the unintentional ligation of the hepatic duct. Primary jaundice and a biliary fistula result and if such cases are not immediately recognized and union effected by a "Sullivan T" tube, the common duct undergoes atrophy and cannot be utilized again. Jaundice with marked hardness or enlargement of the head of the pancreas requires careful consideration, if the gall-bladder is distended the condition is due either to pancreatitis or to malignant disease.

(86) The Chlorine Antiseptics.

W. E. Lee (*Annals of Surg.*, June, 1920) in a review of the chlorine antiseptics, points out that the act of disinfection obeys the laws governing simple chemical reactions and that the cardinal points are adequate active mass of antiseptic, necessary time and perfect contact. Secondly, the germicidal activity depends to a great degree on the medium used, activity being greatest in distilled water. The direct germicidal effect of the chlorine antiseptics depends on the liberation of their chlorine and its combination with bacterial protein. The rapidity with which hypochlorite solutions liberate their chlorine, renders it necessary for them to have large amounts of available protein (devitalized tissue, wound exudate, etc.), or else to be themselves in very dilute strength (0.5%). Such a dilute solution has a negligible direct germicidal action, but a very important indirect action from the formation of hydroxides. The synthetic chloramines are more stable and hence can be used in greater concentration, for they act as reservoirs, giving off chlorine slowly and automatically. The hypochlorite solutions are indicated when there are large masses of dead tissue or profuse exudate which cannot be removed by mechanical means. They should not be used where the tissues are poor in blood (cartilage, tendon, etc.). The chloramines are useful where there is no dead tissue; their action is purely germicidal.

(87) Pseudo-Myxoma Peritonei.

M. G. Seelig (*Surg., Gynec. and Obstet.*, June, 1920) records two cases of pseudo-myxoma peritonei, a condition of which the chief characteristic is the accumulation in the peritoneal cavity of a colloid exudate of a syrupy or a solid consistency. This condition may be clinically benign or it may be accompanied by marked cachexia. The causes are, in the female, the rupture of a pseudo-mucinous ovarian cyst, in the male, the rupture of a mucocoele of the appendix. Sometimes the colloid material is confined to loculi of connective tissue and it may be limited to the right iliac fossa or be widely scattered through the peritoneal sac.

Complete absorption is possible or there may be wide-spread dissemination with much secretory activity, so that the condition simulates ascites, or there may be wide infiltration with the signs of malignancy. The symptomatology varies accordingly. The treatment consists in removing the primary focus and scooping out those portions of the exudate which can be reached.

(88) The Cause of Death in Gun Shot Wounds of the Abdomen.

H. E. Clutterbuck (*Canadian Med. Assoc. Journ.*, May, 1920) remarks that all deaths that take place within twelve hours after operation for gun shot wounds of the abdomen are due either to shock or to hemorrhage. Sometimes at operation holes in the bowel are overlooked. The best way to avoid this is to use a large incision and to start a methodical search from the ileo-caecal junction along both small and large intestines. At the *post mortem* examination in his cases at some of the sutured areas were found intestinal accumulations and when death had taken place about the fourth day paralytic ileus was found to be the cause. Whether this condition was a continuation of the paralysis caused by the lesion or was due to an interruption of the peristaltic waves from interference with Auerbach's plexus is not known. Early operation always revealed the intestine in a state of inhibition of peristalsis. Edema was sometimes found *post mortem* at the site of an anastomosis. It therefore became the custom to cut away the pouting redundant mucous membrane. Some surgeons thought that ileus occurred less often after side-to-side anastomosis, because the coupling was made through undamaged tissue. Copious irrigation and drainage of the pelvis were largely displaced by local sponging and drainage along the wound track. During the winter bronchitis was prevalent and a certain number of patients died from purulent bronchitis or broncho-pneumonia.

(89) Adenoma of the Liver.

H. Hartmann (*Bull. et Mém. de Soc. de Chir.*, April 28, 1920) reports a case of adenoma of the liver in a multiparous woman, aged 41. She had had some fever with jaundice and a mass was palpable above and to the right of the umbilicus, which could not be separated from the liver. No lateral movement was possible and there was no tenderness. Laparotomy revealed a dilated gall-bladder with a single stone. A tumour was also found slightly to the left of the gall-bladder and extending over both superior and inferior surfaces. After cholecystectomy a partial resection of the liver was performed. A preliminary series of catgut ligatures were used, before the resection, to control the haemorrhage. The tumour was solid except for a small cystic cavity the size of a cherry. Microscopically it was an adenoma and at certain points could be seen a transition between the tumour and the liver trabeculae, from which it had obviously grown.

GYNÆCOLOGY AND OBSTETRICS.

(90) Venous Thrombosis, Pulmonary Infarction and Embolism Following Gynæcological Operations.

H. H. Hampton and L. R. Wharton (*Bull. Johns Hopkins Hosp.*, April, 1920) collected statistics of all cases of phlebitis and thrombosis that have occurred in the gynæcological department of the Johns Hopkins Hospital. Whilst compiling these statistics they were struck with the fact that in the case of many patients with phlebitis who later developed pulmonary complications, a diagnosis of pleurisy or pneumonia had been made without any reference to the possibility of infarction and that a certain number of the patients who had suffered from unrecognized pulmonary infarction, died later from pulmonary embolism. They have not conducted any experiments on thrombus formation or infarction, but present the subject entirely from the clinical viewpoint. Of 21,000 patients subjected to gynæcological operation, 205 or roughly 1% developed venous thrombosis. Of these, 81% followed laparotomy. The largest number, 69, followed operations for myomata. In these cases there is a fertile field for the development of thrombosis, traumatized tissue and blood vessels in the presence of organisms. For prophylaxis they suggest very gentle handling of tissues, sharp dissection wherever possible and careful use of retractors. In 66% the vessels of the left leg were involved, in 24% those of the right leg and in 9% those of both legs. The authors believe that many cases of unexplained fever during the second and third weeks are due to thrombosis and phlebitis of some venous trunk, such as those of the pelvis. No clean-cut clinical picture is present in these cases. They sometimes form the source of fatal pulmonary embolism. In the cases reported there was almost invariably a slight irregularity of the temperature from shortly after the operation till the thrombosis became apparent. With this low fever, the pulse usually remains slow. Pain is the first symptom to appear and also the first to disappear. Whilst studying the cases of post-operative thrombosis, the authors' attention was drawn to the fact that a certain number of these patients developed pulmonary complications which seemed to be due to infarct. These cases were usually diagnosed as pleurisy or pneumonia. From 170 such cases the authors have picked out 34 cases of undoubtedly pulmonary infarction. Both femoral thrombo-phlebitis and pulmonary infarction are found in the same type of patient and following the same type of operation. They both appear during the second and third weeks and in both the convalescence is febrile. The signs and symptoms of infarction are: Sudden, sharp pain, more often in the lower part of the right side, shortness of breath, due to the pain and not of the air hunger type. Cough is not a prominent symptom. Hemoptysis was present in only 36%

of the cases. Collapse and cyanosis are not common. A friction rub is usually heard on the second day; râles, changes in the breath sounds and impaired percussion notes are also noted. The temperature shows a decided rise of a hectic type, but it usually drops to normal within a week. In 10% of cases a second infarction occurred and in 12% pulmonary embolism developed. In all of these cases the temperature was slightly raised between the attacks. They state that only 10% of pulmonary infarctions were diagnosed as such in the Johns Hopkins Hospital and as the condition is rarely recorded in other hospital reports, it has apparently escaped the notice of other clinicians.

(91) Maternal Mortality.

C. H. Davis (*Surg., Gynec. and Obstet.*, March, 1920) states that statistics show that childbirth is the second greatest cause of death among women between the ages of 15 and 45. Statistics of the United States for 1915 show 29,200 deaths from tuberculosis and 10,134 from childbirth, of which 4,173 were from puerperal sepsis. He checked the family history of 5,000 applicants for life insurance and found that one man in every 17 who applied for insurance had a mother or sister or both who died from the immediate effects of childbirth, one in 27 from tuberculosis and one in 47 from cancer. This would indicate that amongst the well-to-do childbirth is more fatal than tuberculosis. In Chicago hospitals beds for parturient women are so scarce that less than 10% can go to a hospital for confinement. Nine tenths of the women are confined by midwives or medical practitioners in general practice, few of whom have had any special interest or training in obstetrical problems. It is the duty of every practitioner who undertakes to confine a woman, to give her the best of his skill. Granting that the average practitioner has little skill in the management of a labour, he may at least try to give her a clean delivery. The author states that much of the blame lies at the door of the medical colleges, which devote too much time to the teaching of major surgical operations. The present high maternal mortality is the logical result. The unnecessary maternal mortality must be corrected mainly through the efforts of the specialists in obstetrics and gynæcology. The dual specialty is and should remain a single specialty. The younger man entering it should do the harder, more demanding obstetrical phase, while he is developing the mature judgement and technical skill required for difficult obstetrical or gynæcological operations. The people must be informed regarding the dangers from the lack of surgical cleanliness and reasonable skill in the lying-in room.

(92) The Post-Mature Child.

C. B. Reed (*Surg., Gynec. and Obstet.*, June, 1920) considers that the maturity of the foetus is a definite landmark which, if recognized, indicates that the purpose of gestation has been fulfilled; that the normal end of pregnancy has been reached and, if labour

does not soon occur, both mother and child will be endangered. The mature child must have organs that have attained such anatomical and physiological perfection that they will functionate satisfactorily when called upon by extra-uterine necessities. For some unexplained reason in from 6% to 8% of the cases labour does not set in at the proper time, the child remains in the uterus and continues to grow, more especially in weight than in length. He would limit the length of the mature child between 48 and 53 centimetres and puts the average weight between 2,800 and 3,300 grammes. The size of the foetal head is also a diagnostic point as regards maturity. In the author's cases the occipito-frontal diameter of mature babies measured from 10 to 12 centimetres and the biparietal from 8 to 10 centimetres. The occipito-frontal diameter is measured externally and the biparietal estimated from it. He indicates the dangers to both mother and child during the birth of children weighing above 4,000 grammes. The Ahlfeld method is used to estimate the length. The McDonald manoeuvre indicates the size and McDonald's modification of Perret's method is used to estimate the occipito-frontal diameter. All of these examinations are external and therefore cause no risk of sepsis. If the child is mature and the pelvis not seriously contracted, a week may elapse and if Nature fails in her duty, labour is induced by castor oil and quinine or by the Voorhees bag.

(93) Vaginal Palpation of the Ureter and Ureterotomy.

A. M. Judd (*New York Med. Journ.*, June 5, 1920) states that the pelvic portions of normal ureters can be palpated during vaginal examinations in 90% of women. He uses the left index finger for the left ureter and the right index finger for the right ureter. The ureter is felt as a slender cord about the size of a leather shoe lace. It should be sought first in the lateral fornix by sweeping the finger downwards just above the level of the ischial spine. Acute ureteritis is diagnosed by simple tenderness; chronic ureteritis and peri-ureteritis are diagnosed by tenderness, thickening and decreased mobility; tuberculosis by a thickened nodular tube, with restricted mobility. The narrowest part of the ureter is about 1.25 cm. from the vesical orifice, consequently calculi are more frequently impacted in the lower portion and it is this portion which can be more easily reached by vaginal incision. He recommends Sims's posture for the operation, the patient lying on the left side when the right ureter is to be opened and on the right side when the left ureter is to be opened. The cervix is drawn downwards towards the table and a small incision across the course of the ureter is made through the vaginal mucous membrane. The finger is pushed up into the broad ligament until the stone is reached. The ureter is then isolated, incised and the stone removed. The author states that the ureter may be closed with sutures, if this be desired.

Medical Societies.

MELBOURNE PÆDIATRIC SOCIETY.

A meeting of the Melbourne Pædiatric Society was held at the Children's Hospital, Melbourne, on August 11, 1920, the President, Dr. A. E. Rowden White, in the chair.

Mr. W. Kent Hughes presented a boy, aged 9 years, for whom he had been obliged to operate for recurrent *talipes equino-varus*. He had treated the child some years before, but the boy had not been brought up for observation at intervals, and thus furnished another example of the futility of operating without maintaining supervision afterwards.

In dealing with the recurrence, Mr. Kent Hughes had found it necessary to divide the plantar fascia and its various intermuscular septa and the long and short plantar ligaments. In addition, he had divided several of the tarsal ligaments, but had left the tendon of the *peroneus longus* intact. The foot was then wrenched into good position with some difficulty and was secured in the corrected position by the use of a back splint. The splint had since been discarded and the foot was now in plaster.

Mr. Kent Hughes next drew attention to a boy, aged 14 years, who had first sought treatment at the Children's Hospital in April 1918, on account of flat foot of a severe grade. Treatment had been painstaking and persistent, but improvement had been very slow and for a long time the boy had not been able to walk without suffering pain under the arch and on the dorso-lateral aspect of both feet. The measures adopted for relief had included several periods in plaster in the over-corrected, varoid position, massage, appropriate boots and the use of a metal arch under the sole of the right foot. Spasm of the plantar muscles and of the peronei had been very troublesome. Finally, a further operation had been performed at which the peronei had been divided and the foot further wrenched into the varoid position which had been maintained in plaster. The boots prescribed for this boy were exhibited and examined by those present. This lad was now able to walk in comfort, but the advanced condition of flat foot had been very obstinate in yielding to treatment.

Mr. Kent Hughes's third patient was a boy, aged 9 years, for whom he had removed a sarcoma from the orbit in infancy. He had not seen the child since, until a week before the meeting, when his mother brought him to hospital to obtain relief for retraction of the upper eye-lid. Examination detected a corneal ulcer which had resulted from the exposure of the eye-ball.

A new lid had been fashioned by a plastic operation, the steps of which were demonstrated. Members were impressed with the excellent result promised by the operation.

Dr. H. Douglas Stephens showed, what was in the opinion of all present, the very excellent result attendant on hare-lip and cleft palate operations on a boy, aged 3 years.

In reply to questions, Dr. Stephens said that he had performed the hare-lip operation in the first few weeks of life and had completed the palate but a few weeks ago. These were the periods he would choose for the respective operations, but the cleft palate could be repaired at any time between the ages of 18 months and 3 years. Personally he thought the best age was 2½ years; if performed too early the operation was more difficult and the younger infants were more prone to put the tongue through the sutured palate. Where good relaxation was obtained he used horse-hair only as suture material, but when tension sutures were necessary he preferred silver wire to silk-worm gut.

Mr. Kent Hughes remarked that there was something wrong with the operation when tension sutures were necessary. Dr. Stephens, while recognizing the supreme importance of avoiding tension whenever possible, pointed out that it was possible to carry relaxation of the flaps to the point at which their nutrition became impoverished. In the child before them, the tonsils were definitely enlarged and he had often noticed that enlargement of the tonsils followed the operation for cleft palate. He would hesitate to adopt the Sluder operation in the presence of a repaired palate, on account of the danger of damaging the posterior faucial pillars.

Dr. F. Kingsley Norris suggested that contraction of the

posterior pillars after the palate operation threw the tonsils forward and thus lead to their greater prominence and appearance of enlargement.

Mr. Kent Hughes emphasized the necessity for ascertaining that the tonsils, antra and ethmoid sinus were clean before operating for cleft palate. An otherwise well performed operation might be completely spoiled by sepsis from these sources if the precaution were overlooked. He favoured the Langenbeck operation as opposed to Lane's in the repair of cleft palate; the latter led to too much scarring, though it was useful for closing small anterior "blow-holes."

Dr. Stephens next showed a male infant, aged one month, who, as a premature baby, had required operation for the relief of strangulated inguinal hernia. It had been necessary to resect 6 cm. of ileum and he thought that this infant was possibly the youngest instance on record in which this operation had been successfully carried out. The case would be reported in full in a subsequent issue of the *Journal*.

Dr. Stephens's third patient was a child, aged 18 months, in whom had occurred multiple foci of suppuration in the frontal bone. Each point had been incised as it appeared and cultures from the pus had yielded *Staphylococcus aureus*. The condition was at that time of ten weeks' duration. The X-ray photograph was exhibited, and Dr. Stephens had no doubt but that the condition was an extensive osteomyelitis of the frontal bone, spreading along the diploë. As yet he had not carried out a flap operation, but had treated the condition more or less expectantly by incision of the various points of suppuration as they arose. He had observed frequently in the out-patient department that in osteomyelitis of the frontal bone large sequestra and flakes of dead bone were not formed; the diseased foci seemed rather to crumble away. In the case of the particular infant he was showing, however, he was not very confident that he would not have to perform a flap operation eventually.

Mr. C. W. B. Littlejohn asked attention for a child, aged 3½ years, who first appeared at the out-patient department two weeks previously with a fusiform almost painless swelling of the first metatarsal joint. There was a history of slight injury to the toe three months ago and inquiry into the family history elicited the fact that there was tuberculosis on the father's side. No adenitis could be detected associated with the swelling and the child could walk well, though he showed a tendency to turn the foot inwards. Up to the present there had been no tenderness in the swollen area, but a tender spot could now be demonstrated anteriorly.

Mr. Littlejohn exhibited a radiogram and demonstrated a periosteal sheath well out from the bone. On clinical grounds he had regarded the condition as a syphilitic arthritis of the metatarso-phalangeal joint and this diagnosis appeared to be supported by the X-ray. However, the Wassermann test was negative and the swelling was now more angry looking than formerly, exhibiting a definitely tender spot; in view of the presence of impetigo on the opposite leg, the condition might after all represent a low-grade septic process.

Members generally considered that a mild septic infection was most probable and advocated incision.

Mr. Littlejohn's second patient was a boy, aged 12, who had been referred to him from the medical side on the day prior to the meeting. The notes stated that two months ago the lad complained of pain and swelling of the left heel and ankle; later the pain moved to the big toe, which had remained red and very tender along the phalanx and metatarso-phalangeal joint. According to the boy's statement, some discharge had escaped from the under surface of the foot and a sinus was now to be seen under the ball of the great toe. The boy's father was said to be tuberculous. By the von Pirquet test the boy had shown a positive reaction to both human and bovine tuberculin; the Wassermann test applied to the blood serum was negative.

The general opinion was that the sinus should be explored and that it was not improbable that a foreign body would be encountered as the boy was in the habit of running about with bare feet.

Dr. Reginald Webster showed:—

(1) Massive lobar consolidation with commencing softening of tuberculous nature in a baby aged 11 months.

(2) A section of small bowel from the same infant, showing tuberculous ulceration.

(3) Hair ball from the stomach of a girl, aged 11 years, removed post mortem, which had formed a perfect cast of the stomach.

PUBLIC HEALTH OF NEW SOUTH WALES.

(Continued from Page 138.)

The Metropolis of Sydney.

The birth-rate in the metropolis of Sydney during the year 1918 was 24.87 per 1,000 of population, a rate lower than any recorded since 1903. The illegitimate birth-rate was 1.86 per 1,000 of population. The corrected death-rate was 10.05 per 1,000, while the infantile death-rate was 60.28 per 1,000 births.

Scarlet fever was not very prevalent in 1918. From 1901 to 1909 this disease occurred in one of those curious waves which recur periodically in different parts of the world. The attack-rate reached its highest point in 1903, when 5.77 out of each 1,000 persons of the community were affected. In the following four years very little scarlet fever infection prevailed. In 1914 the attack-rate rose suddenly from 0.79 to 2.32, while in 1915 it reached 5.53. In the following year it receded somewhat; in 1917 it was 1.44 and in 1918 it again reached a low figure, namely, 0.81. The case mortality during the past 20 years has varied between 0.8% and 3.03%. In 1918 it was 1.7%. The most interesting details given with regard to the outbreaks were those concerning the cadets on board His Majesty's Australian Ship *Tingira*. In September, 1918, 52 of the boys became infected. The remainder of the ship's population was transferred to a site at North Head and the ship was thoroughly fumigated. It can scarcely be supposed that the outbreak was mastered by the fumigation of the ship. No doubt, the isolation of the patients and the segregation of the contacts sufficed to check the spread.

The curve of incidence of diphtheria since 1898 within the metropolis, is an interesting one. In the first year the attack-rate was 1.42 per 1,000 of population. During the following four years it fell below 1.00 and in 1900 reached 0.63. From 1903 to 1908 the rate showed small variations between 1.19 and 1.53. In the following year the curve adjusted itself to a new level, at first approaching 2.00 and then varying above and below 3.00. In 1917 it was still 2.94 and in 1918 2.65. This curve is eloquent testimony of the complete failure on the part of the health authorities to control the infection. The case mortality is also illuminated by the table. In 1898 the case mortality was 12.23%. It is reasonable to assume that diphtheria antitoxin was used in few cases and in small doses up to 1900. Notwithstanding the experience gained in Europe in the first three or four years after its introduction, the case mortality in Sydney during the years 1901, 1902 and 1903 was 14.32%, 9.41% and 10.06% respectively. From that time onwards the effect of antitoxin treatment is more or less manifest, although this treatment cannot account for a distinct increase in the case mortality in the six years from 1912 to 1918. It is an unfortunate fact that the neglect on the part of the medical practitioner to apply the treatment as early as possible or on the part of the parent to seek medical advice within the first few hours of illness, results in a very material increase in the case mortality. In his excellent lectures on diphtheria, Dr. Frank V. G. Scholes shows that at the Infectious Diseases Hospital, Fairfield, Melbourne, the mortality among children admitted to the hospital on the first day of disease was 0.7%, while it was 2.4% among those admitted on the second day of disease, 5.2% among those admitted during the third day of disease and so on up to nearly 12% among those who were not admitted until six or seven days had elapsed. Dr. Purdy gives the death-rate per 1,000 of population for the various years and from these figures it is more than ever apparent that the community is not properly protected against the dangers of this preventable malady.

A more encouraging story is that of the combating of enteric fever within the metropolis during the past twenty years. Between the year 1898 and 1905 the attack-rate per 1,000 of population sank irregularly from about 2 to just over 1. In 1906 and 1907 it was 0.89, but in 1908, 1909 and 1910 it again rose to over 1. During the following six

years it varied between 0.76 and 0.98, while in 1917 it was 0.48 and in 1918 0.37. Dr. Purdy does not discuss the reason for the general downward tendency of the curve, but he calls attention to the probability that the number of cases notified does not represent the total number of cases which occurred, since the mortality-rate was 17.1%, an unusually high figure, and since the infections do not appear to have been of an unusually high virulence. In four cases that terminated fatally, no notification had been received. These facts are very disquieting. It is obviously impossible for the health authority to carry out its duties with any prospect of success if general practitioners neglect the simple duty of prompt notification in accordance with the law.

During the year 1918, 545 deaths were due to tuberculosis. Of these, 466 were of persons suffering from pulmonary tuberculosis and 38 of persons suffering from tubercular meningitis. In addition to the deaths from pulmonary tuberculosis mentioned above, there were 41 which occurred in the benevolent asylums of persons who were formerly residents of the metropolis. The total should therefore be 507. The highest number of deaths during the past 16 years was 658 in 1915, while the lowest was 481 in 1917. The average number of deaths was 601.7. During the year 1,091 notifications were received. In 638 instances the notifying practitioner intimated that the patient should be visited by officials from the Department and in 453 that they should not be visited. It appears that 10% of the patients were described as soldiers.

Dr. Purdy gives further interesting information concerning the number of deaths from influenza, pneumonia, measles and various other infective process and the number of cases notified of poliomyelitis, malaria and epidemic cerebro-spinal meningitis. In his concluding notes he deals with the necessity for relieving the congestion within the metropolis and deprecates the tendency for the erection of flats and tenement houses.

The Hunter River Sanitary Districts.

The area over which Dr. Robert Dick has control measures 3,000 square miles. He is supported by a staff consisting of a senior sanitary inspector and a nurse inspector. In each of the 17 municipalities and five shires within the area, there is a sanitary officer. Of these 22 officers, only eight hold certificates. Dr. Dick gives a detailed account of the public health work carried out during the year and includes a statement of the incidence and mortality of the notifiable diseases. He points out that the only part taken by his Department in connexion with the Baby Clinic at Newcastle is that of receiving the notification of the birth and forwarding the information of those in charge of the clinic. It appears that one nurse was fined 10s. for not notifying a birth.

In his general summary Dr. Dick records with gratification that during his absence the office accommodation has been increased, which undoubtedly has added to the efficiency of the work. He pleads for the installation of electric light. He also demands a motor car, to enable him to carry out his duties with greater expedition. The district is a very large one and the methods of transport at present available are unsatisfactory. He regards his staff as too small and asks for the appointment of a district food inspector and a nurse inspector. Formerly bacteriological examinations were carried out by him at the Departmental Laboratory. During his absence this work was discontinued. A pathological department exists at the Newcastle Hospital, where specimens are examined at fixed rates of payment. He suggests that the matter should be considered whether the free examination of specimens should again be undertaken in his Department.

He calls the attention of medical practitioners and of local authorities to the provisions of the *Public Health Act, 1902*, and the *Public Health (Amendment) Act, 1915*, in regard to the notification of infectious diseases and especially of pulmonary tuberculosis. He finds that the local authorities are not as energetic in the discharge of their duties "as is desirable in regard to health matters." He deals with the question of disinfection; the conduct of noxious trades and the like. In connexion with the prosecution for breaches of the *Pure Food Act*, he urges that the fines imposed are

quite inadequate. In the last place, Dr. Dick states that the need for isolation hospitals to which persons suffering from infective processes could be admitted, is becoming more urgent each year. An area of ground at Waratah was reserved for this purpose many years ago, but no steps have yet been taken to erect the necessary buildings.

Broken Hill District.

Dr. J. F. Bartley's report is commendably short. In connexion with vital statistics he points out that the birth-rate was 35.96 per 1,000 of population, which is an improvement on the past three years, but which is considerably lower than the rate in 1913 and 1914. The death-rate has apparently remained stationary for six years at 15.5 or thereabouts. The number of people who arrived by train from South Australia was 1,438 less than the number who departed. As the natural increase of the population was only 614, there was a net of loss of 824 during the year. This is a serious matter in a population of approximately 30,000. The infantile mortality was 99.16 per 1,000 births. In 1913 it was as high as 143.38.

The incidence of diphtheria and enteric fever, although considerably lower than in the past five years, was still relatively high. There were 323 cases of diphtheria and 45 of enteric fever. On the other hand, scarlet fever was more prevalent than in former years.

A baby clinic was established under Government control and good work was being conducted by the two nurses in charge. Dr. Bartley calls attention to the insanitary condition of the slop carts and sealed pan vans. Although some improvement had taken place, much remained to be done. He hopes that the "illegal, insanitary night-cart system" would soon be abolished. House to house sanitary inspection is carried out continually and is quite essential. The lack of proper making and grading of these streets and lanes renders it difficult to keep them in satisfactory condition; consequently the householders are not encouraged to look after the proper sanitary cleaning of their yards.

Micro-Biological Laboratory.

Dr. J. Burton Cleland at the time of the issue of the report, was still in charge of the Micro-Biological Laboratory. Dr. Cleland records the fact that Dr. E. W. Ferguson was absent on active service during the year 1918 and that Mr. George Grant, one of the laboratory assistants, died from malaria at Gaza on August 31, 1918. An obituary notice is published in the report.

In Part I. is set out as usual the statistical record of the work undertaken in the laboratory, the number of examinations carried out for various institutions, a list of diseases in connexion with which the examinations were undertaken, lists setting forth the nature of the material examined, an enumeration of the various culture media prepared, another of the various vaccines prepared and similar matters are included in the statistical return.

Part II. is headed "Reports of Investigational Work." In the first place, Dr. Cleland gives an account of the examination of rats caught and submitted to the Department. In connexion with this he gives in tabular form the incidence of the different forms of fleas found on these rats.

Dr. E. W. Ferguson publishes a list of mosquitoes captured in the State, especially in the years 1916-1917. The hope is expressed that the information contained in the list may be found useful when a mosquito survey of the whole State is undertaken.

Dr. Cleland's next contribution takes the form of an historical account of influenza epidemics in Australia. He deals with the outbreaks of 1820, 1825-6, 1836, 1838-1847, 1847-1860, 1866, 1881, 1885, 1886-1888 and 1890-1891. The information on which this history is based, has been collected from the records published in the various Australian and other medical journals. The account is an interesting one, notwithstanding the fact that the identity of the illnesses labelled influenza by many medical authors is by no means established. Dr. Cleland adds to these accounts summaries of articles which have appeared since the year 1901. He also re-publishes as an addendum some extracts from the Federal Quarantine Service Publication No. 18, in which the Director of Quarantine gives some interesting early information.

AUSTRALIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The fifteenth meeting of the above Association is to be held at the University, Hobart, commencing January 5, 1921. Those who purpose attending the meeting are invited to send their names and subscriptions (£1) to the Local Secretary of the State in which they reside. The Secretaries for the various States are as follows:—

New South Wales: J. H. Maiden, Botanic Gardens, Sydney.

Victoria: A. D. Rivett, B.A., D.Sc., Lecturer in Chemistry in the University of Melbourne.

South Australia: Professor W. Howchin, F.G.S., Professor of Geology and Palaeontology in the University of Adelaide.

Western Australia: A. Gibb Maitland, Government Geologist, Perth.

Queensland: John Shirley, D.Sc., Teachers' Training College, Brisbane.

Tasmania: Professor T. Thomson Flynn, Ralston Professor of Biology in the University of Tasmania.

The sections are as follows:—

SECTION A.—ASTRONOMY, MATHEMATICS AND PHYSICS.

President: Professor H. J. Priestly, M.A., University of Queensland.

Secretaries: Frank Ellis, M.A., Education Department, Hobart; Dr. Bernard Thomas, M.B., C.M., Glenorchy, Tasmania.

SECTION B.—CHEMISTRY.

President: Professor N. T. M. Willsmore, University of Western Australia.

Secretaries: G. O. Smith, B.Sc., Town Hall, Hobart; L. F. Stutterd, B.Sc., Electrolytic Zinc Co., Ltd., Risdon, Tasmania.

SUBSECTION PHARMACY.

Secretary: J. Smithies, Collins Street, Hobart.

SECTION C.—GEOLOGY AND MINERALOGY.

President: Professor W. Noel Benson, B.A., D.Sc., University of Otago, New Zealand.

Secretaries: W. H. Clemes, B.A., B.Sc., Leslie House School, Hobart; A. N. Lewis, c/o Lewis, Hudspeth, Perkins and Dear, Collins Street, Hobart.

SECTION D.—BIOLOGY.

President: Professor A. J. Ewart, D.Sc., Ph.D., University of Melbourne.

Secretary: C. E. Lord, Curator Tasmanian Museum, Hobart.

SECTION E.—GEOGRAPHY AND HISTORY.

President: Sir Douglas Mawson, B.E., D.Sc., University of Adelaide.

Secretaries: J. Moore-Robinson, 62 St. George's Terrace, Hobart; C. S. King, University, Hobart.

SECTION F.—ETHNOLOGY AND ANTHROPOLOGY.

President: His Excellency Judge Murray, C.M.G., Lieutenant-Governor, Papua.

Secretaries: Dr. W. Lodewyk Crowther, Macquarie Street, Hobart; P. S. Seager, I.S.O., Lindisfarne, Tasmania.

SECTION G.—SOCIAL AND STATISTICAL SCIENCE.

President: Professor J. Hight, M.A., Litt.D., Canterbury College, New Zealand.

Secretary: D. B. Copland, M.A., University of Tasmania.

SECTION H.—ENGINEERING AND ARCHITECTURE.

President: Mr. Maurice E. Kernot, M. Inst. C.E., M. Am. Soc. C.E., Chief Engineer, Railway Construction Branch, Victorian Railways, Melbourne.

Secretaries: A. E. Middleton, Public Works Department, Hobart; Bernard Walker, c/o Hutchison & Walker, Hobart.

SECTION I.—SANITARY SCIENCE AND HYGIENE.

President: Dr. J. H. L. Cumpston, M.D., D.P.H., Federal Quarantine Department, Melbourne.

Secretaries: E. J. Tudor, Public Health Department, Hobart; H. E. Ballamy, M. Am. Soc. C.E., Town Hall, Hobart.

SECTION J.—MENTAL SCIENCE AND EDUCATION.

President: Professor A. Mackie, M.A., University of Sydney.

Secretaries: J. A. Johnson, M.A., Training College, Hobart; E. Morris Miller, M.A., Litt.D., University of Tasmania.

SECTION K.—AGRICULTURE.

President: Professor A. J. Perkins, Director of Agriculture, South Australia.

Secretaries: R. A. Black, Agricultural Department, Hobart; S. H. Grueber, Agricultural Department, Hobart.

SECTION L.—VETERINARY SCIENCE.

President: Professor H. A. Woodruff, M.R.C.V.A., University of Melbourne.

Secretary: T. Philp, B.V.Sc., Agricultural Department, Hobart.

In addition to the meetings of the sections, arrangements are in progress for evening lectures and entertainments and for excursions to places of interest.

The ticket of membership entitles the holder to attend all meetings and entertainments, and to purchase tickets for the excursions. Each member will also receive a copy of the Association's report.

Concessions have always been granted on the occasion of previous meetings by the Commissioners of Railways and Inter-State steamship companies to members coming from a distance. Particulars of these will be given in a subsequent circular.

Members who have paid subscriptions are entitled to purchase ladies' (associates') tickets at 10s. each. Associate tickets admit the holders to all the privileges of members, except the right to receive the report (a volume of several hundred pages, with many illustrations).

Correspondence.

THE ACTION OF NOV-ARSENIO-BILLON.

Sir: From instances which have come under my personal observation, it would seem there are some who employ the chemo-therapeutic action of these synthetic chemo-molecular combinations as though they did not possess highly sensitive chemical affinity which under given conditions results in the production of a drug which is much more highly toxic than even kharsivan itself, i.e., the so-called arsenic oxide. For this reason under no circumstances should there be prolonged agitation of the solution or undue exposure in the air. In the application of the arsenobenzol compounds there are many important matters which of necessity have to be taken into consideration, if we are to avoid courting danger and disaster. Notwithstanding the fact that in spite of all the precautions we may take, danger, the shadow of death and death may cross our path. It is of importance that we should note the age and sex of the patient, the stage of the disease, the nature of the solvent, the dose of the drug and the frequency of its administration.

We know that where there is a localized deposit of the *spirochaeta pallida* in the seat of vital organs, for example, the brain, a reaction similar to the Jarisch-Herxheimer in the luetic may be brought about which may be serious to life or even produce death itself. Having regard to the nature of the solvent used, we are reminded from the work of Wechselmann, McIntosh and Fildes, Hort and Penfold, who brought forward the very important proof that destroyed bodies of bacteria which may occur in improperly distilled and sterilized water, may give rise to very important and serious phenomena, such as fever, vomiting, diarrhoea, etc.. The water, therefore, which is to be used as the solvent must be properly distilled and immediately sterilized. In addition to the exclusion of bacteria, it is essential to have the water not only free from combined chlorine, but free from free chlorine also. After the elimina-

tion of everything and the introduction of nothing care must be taken lest of the possibility of subsequent contamination. It is, therefore, safer to use the water direct from its sterilized container. Nor should the water which has been in contact with metal pipes, lead, iron or zinc, be used. Water from mains should therefore under no circumstances be made use of, even were it possible that an emergency could occur and, of course, distillation from a metal still is not permissible. There is but one water which can be held to be right to use as the solvent for such compounds. All others are wrong, absolutely. The technique in the preparation and administration requires much care and those who are not prepared to carry out the work as it should be, would be well advised to leave it alone until they are. I have seen an arseno-benzol compound made up in a large, open measure glass in bulk solution, then left standing upon a bench until four patients were ready to have their supply injected in succession and at the termination of the task I was assured it was a very convenient arrangement. This was done where hundreds of patients received treatment and I know it was considered there were not many points to learn either in syphilis or its treatment. I would like to feel that the real danger in the use of "914" is undoubtedly failure to inject fully into the vein, but I am satisfied those who are so convinced will one day have a rude awakening. What does toxic jaundice, hæmatemesis, delirium and coma within three, four or five days stand for? These things are not to be thought of lightly and one realizes this when he meets them face to face. Minimal doses of the arsenical compounds will not, of course, obviate reactions due to faulty water. The toxic fat fixation, however, is quite another matter, but here again it appears that the factors of dosage and time appear to have quantitatively but little determining influence on the final result. Whether the symptoms appear rapidly, after a few doses of 0.45 gramme each, and such was the case where only two doses had been given, or whether they are delayed for six weeks after completion of a full course of eight injections, the final result is the same in a large majority of the fatal cases.

Yours, etc.,

RICHARD JONES.

110 Collins Street, Melbourne.

August 13, 1920.

Medical practitioners, like other citizens, often delay actions until the eleventh hour. At the time of going to press the Second Peace Loan has not yet secured anything approaching sufficient support. We feel convinced that the medical profession will not fail to contribute its share, but we would urge our readers to get in as promptly as possible. It is unwise to chance an extension of time. Buy Peace Bonds!

A NEW MEDICAL JOURNAL.

The *Annals of Medicine with Abstract of the World's Literature* is a new quarterly publication produced in New York in the interests of American medicine under the direction of the Councilors of the American Congress of Internal Medicine and the American College of Physicians.

The inaugural volume contains an able address on the field of internal medicine delivered by Dr. R. W. Wilcox, the President of the American College of Physicians.

Several articles dealing with subjects of importance to those concerned with scientific and clinical medicine are contributed by well-known American practitioners.

The section devoted to abstracts of current literature is replete with numerous concise reviews of recent publications appearing in the medical journals of the world.

The volume is admirably produced and gives promise of ranking amongst the most valuable of current medical

In his speech at the opening of Parliament on July 29, 1920, His Excellency the Governor of South Australia referred to the proposal to make considerable additions to the Adelaide Hospital buildings, under powers conferred by the *Public Charities Fund Act Further Amendment Act, 1915*. In the next place, he stated that the donation of the British Red Cross Society of £15,000 for the purpose of the erection of a dental hospital would be supplemented by a Govern-

ment grant of £10,000 and that the work would be undertaken at an early date.

Among the bills forecasted in his speech is a measure providing for the prevention of the introduction and spread of venereal diseases and another bill for the registration of nurses and for the exclusion from practice of women other than qualified nurses. It is further proposed to amend the *Inebriates Act* and the *Mental Treatment (War) Act*.

Proceedings of the Australian Medical Boards.

TASMANIA.

The undermentioned has been registered by the Medical Council of Tasmania, appointed under the provisions of *The Medical Act, 1908*, as a legally qualified medical practitioner:—

Francis Reginald D'Alton Glissan, M.B., Ch.B. (Univ. Birmingham), 1904.

Medical Appointments.

Approval has been given to the promotion of Dr. Sydney E. Jones (B.M.A.) and Dr. Clifford Henry (B.M.A.) from the position of Junior Resident to Senior Resident Medical Officers in the Mental Hospitals Department of the Public Service Board of New South Wales.

Announcement is made of the undermentioned appointments to the Honorary Medical Staff of the Coast Hospital, New South Wales:—

Dr. H. C. Rutherford Darling (B.M.A.) as Honorary Surgeon; Dr. J. C. Storey, O.B.E. (B.M.A.), as Honorary Surgeon; the Honourable J. B. Nash (B.M.A.) as Honorary Surgeon; and Dr. H. C. Taylor Young (B.M.A.) as Consulting Surgeon.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxvii.

University of Sydney: Chair of Surgery.
University of Sydney: Chair of Physiology.
Home Secretary's Department, Brisbane: Medical Officer for Venereal Diseases Work.
Royal North Shore Hospital of Sydney: Two Honorary Assistant Obstetricians.
Royal Hospital for Women, Paddington, Sydney: (a) Honorary Assistant Surgeon, (b) Resident Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Institutes or Medical Dispensaries. Manchester Unity Independent Order of Oddfellows. Ancient Order of Foresters. Hibernian Australian Catholic Benefit Society. Grand United Order of Free Gardeners. Sons of Temperance. Order of St. Andrew. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital. Stannary Hills Hospital.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

- Sept. 8.—Vic. Branch, B.M.A.
Sept. 9.—N.S.W. Branch, B.M.A., Last day for nomination of two Candidates for election to Federal Committee.
Sept. 10.—N.S.W. Branch, B.M.A., Clinical.
Sept. 10.—S. Aust. Branch, Council.
Sept. 13.—Tas. Branch, B.M.A.
Sept. 14.—N.S.W. Branch, B.M.A., Ethics Committee.
Sept. 15.—W. Aust. Branch, B.M.A.
Sept. 15.—Central Southern Med. Assoc. (N.S.W.).
Sept. 16.—Vic. Branch, B.M.A., Council.
Sept. 21.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Sept. 24.—N.S.W. Branch, B.M.A.; Election of two members to Federal Committee.
Sept. 28.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Sept. 29.—Vict. Branch, B.M.A., Council.
Sept. 30.—S. Aust. Branch, B.M.A.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.
Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.
All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney. (Telephone: City 2645.)